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ABSTRACT

The report is a discussion of the curriculum and supportive educational facilities for the state of Hawaii. An administrative view of guidance services and teacher programing is included. Supportive facilities are sketched, showing their relationship to such specific instructional areas as music, shop, home economics, drawing and painting, conference rooms and multi-purpose rooms. Specificaticns are also presented for theatres, audio visual facilities and equipment, and general storage areas. (GM)

ED036972

# EDUCATIONAL SPECIFICATIONS

Developed from

The Program Delineation Study

January - April 1961

for

PEARL HARBOR HEIGHTS HIGH SCHOOL

This project was made possible by a grant to the Department of Education by the Educational Facilities Laboratories, Inc., coordinated by the Western Regional Center at Stanford University and implemented by Dr. Deal Crooker and staff.

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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Honolulu, Hawaii

1961

STATE OF HAWAII

Department of Education

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# TABLE OF CONTENTS

Page

Preface . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . i
Introduction . . . . . . . . . . . . . . . . . . . . . . . . . . . . ii
Adult Education in the Secondary Schools . . . . . . . . . . . . . . 1
Agricultural Arts . . . . . . . . . . . . . . . . . . . . . . . . . 5
Art. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 8
Business and Distributive Education . . . . . . . . . . . . . . . . 13
Foreign Language . . . . . . . . . . . . . . . . . . . . . . . . . . 19
Gifted Program . . . . . . . . . . . . . . . . . . . . . . . . . . . 26
  Some Objectives in Educating the Gifted . . . . . . . . . . . . . 32
  School Provisions for the Gifted, K - 12 . . . . . . . . . . . . . 33
  Cultivating Creativity in Our Schools . . . . . . . . . . . . . . 35
  Abstract--An Overview of the Secondary School Guidance Program . . . 44
  Basic Criteria for a Total Guidance Program . . . . . . . . . . . 45
  Guidance Staffing and Pupil Scheduling . . . . . . . . . . . . . . 47
  Teacher Programming. . . . . . . . . . . . . . . . . . . . . . . . 49
  New Design of Facilities . . . . . . . . . . . . . . . . . . . . . 50
Health and Safety Instruction . . . . . . . . . . . . . . . . . . . 55
Homemaking . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 57
School Lunch Program . . . . . . . . . . . . . . . . . . . . . . . . 61
Industrial Arts . . . . . . . . . . . . . . . . . . . . . . . . . . 64
Language Arts . . . . . . . . . . . . . . . . . . . . . . . . . . . 70
Journalism . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 74
Mathematics . . . . . . . . . . . . . . . . . . . . . . . . . . . . 76
Music . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 79
Physical Education . . . . . . . . . . . . . . . . . . . . . . . . . 86
Science . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 91
Social Studies . . . . . . . . . . . . . . . . . . . . . . . . . . . 95
Speech . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 102
Audio Visual . . . . . . . . . . . . . . . . . . . . . . . . . . . . 105

# PREFACE

The Department of Education of the State of Hawaii has been extremely fortunate in recent years to have had a happy combination of factors which have made it possible to explore and implement new and better ways of carrying out its instructional program and designing and constructing better school facilities. This has been coupled with the good fortune of having members on the Board of Education who had confidence in the professional staff and gave approval for the exploration and implementation of new programs and designs which would insure quality education. The enthusiasm and willingness of the professional staff members on the state, district and school levels have also been a tremendous force in improving the instructional program and the implementation of newer techniques of teaching, staff utilization and the use of newer teaching aids. These, then, have been the major factors in bringing about a climate for change and improvement.

The comprehensive survey of Hawaii's public school system by Dr. William Odell and Associates pointed out existing problems and recommended solutions which would greatly improve the Department of Education. More recently, men like Dr. Lester Nelson, Dr. Alvin Eurich, Dr. Lloyd Trump, Dr. Finis Engleman and other nationally known educators have become interested in the rich potential of Hawaii breaking new grounds in educational advancements. Dr. Harold Gores, President of Educational Facilities Laboratories, Inc. and Dr. James MacConnell of Stanford University and Western Regional Director, E.F.L., have been instrumental in getting E.F.L. funds for breakthrough in school facilities construction in Hawaii. These funds will provide studies for an elementary school in Hahaione Valley, Hawaii Kai and a high school in the Pearl Harbor Heights development.

# INTRODUCTION

The public school system in Hawaii began soon after the arrival of the missionaries from the New England states in 1820. The public school system has made tremendous strides in the past several decades. Today, it compares favorably with the better systems in operation throughout the nation. Education has enjoyed and will continue to enjoy a high status among the people of Hawaii. With the establishment of the East-West Center at the University of Hawaii, education will take on greater meaning, not only with the people of Hawaii but with the peoples of Asia.

Hawaii, because of its strategic location in relation to countries in the Pacific rim and Asia, is destined to play an increasingly vital role in the new frontier of education. Ferment in world affairs today makes this role, however difficult, more challenging and more urgent.

The role the Department of Education will play in its effort to better interpret American public education to the peoples of Asia is a vital one. Therefore, the Department of Education can no longer remain content and secure in the crystallization of the formal, traditional and stereotype curriculum and teaching methods of the past several decades. It must be cognizant of the rapid changes being brought about in the field of education. It must keep abreast with the major breakthroughs which are taking place in many sections of continental United States. It must embody the latest thinking in educational philosophy, better instructional methods and greater staff utilization. It must implement the latest ideas in school architecture and better construction techniques of school facilities. If these can be accomplished, then Hawaii's public schools can become the showcase and the pattern of better schools of tomorrow.

To Hawaii's schools, then, can come the educational leaders of the countries of the Pacific rim, Asia, South America and Africa, to observe and study the latest educational practices. They can take back with them the newer concepts of American education and by proper application could help their countries "leap frog" by several decades in the implementation of desirable and tested educational concepts and methodology.

The Department of Education has undertaken, during the past several years, several major activities to upgrade its instructional program. The major emphasis has been in the following areas:

1. The development of the Scope and Sequence of Hawaii schools curriculum.
2. The development and publication of program guides in Physical Education, Art, Music, Guidance and Counselling and the Language Arts.
3. The development and publication of a state-wide Educational Specifications and Building Guides.
4. The School Self-Study Evaluation Program for the improvement of instruction.
5. The implementation of many recommendations of the Odell Survey.
6. The exploration and study of team teaching, ungraded elementary, better staff utilization, newer teaching aids and instructional television both open and closed circuit.
7. State-wide elementary and secondary school principals' conferences.
8. The Curriculum Instructional Improvement Program for all school districts.

The foregoing efforts were concrete evidences of the Department's desire for improvement and change to meet the newer educational needs as demanded because of changes in today's world. Another activity which demonstrated the Department's readiness and willingness to move ahead was the state-wide Program Delineation Study set up jointly by the Department of Education and Educational Facilities Laboratories.

The Program Delineation Study mobilized the state and Oahu district curriculum specialists and selected principals and teachers to study, discuss and gain new insights in the newer educational methods. Also participating in the

Study were several staff members of the College of Education of the University of Hawaii, representatives from private and parochial schools, the P.T.A. and the press.

The first week was devoted to an over-all orientation period to the newer educational methods. Reports were given by members of the University of Hawaii's Team Teaching Observation group, E.F.L. Director's study of the newer schoolhouse construction, demonstration of closed circuit instructional television, staff utilization patterns, newer trends in audio-visual education, and the "live science" program.

Following the orientation period, nineteen subcommittees representing the major subject and program areas began an intensive study to see the major possible utilization of the newer concepts presented to them. The subcommittees submitted their reports to the Elementary and Secondary Program Delineation Study Committees. It was, then, the responsibility of these two major committees to develop patterns for initiation and implementing the newer instructional program for the State of Hawaii.

During the final week of decision making, the assistance of outstanding mainland consultants were made available by the Educational Facilities Laboratories. Dr. Robert Anderson of Harvard University, Mr. Harold Howe II, Superintendent of Schools in Scarsdale, and Dr. James D. MacConnell of Stanford University came to assist the study committees in their final endeavor to develop the elementary and secondary programs which were to form the final basis for the new educational specifications.

Paralleling the Program Delineation Study, a school planning workshop was conducted under the sponsorship of the City and County of Honolulu, Educational Facilities Laboratories, Inc., and the Department of Education. The main purposes of the workshop were:

1. Presentation of the new educational trends, their emphasis and effect on schoolhouse construction. This presentation was most ably done by Dr. Robert Anderson and Mr. Harold Howe.
2. Presentation of newer construction materials and economical techniques in construction. Dr. Gilbert Olson, consulting engineer for Hawaii Kai, served as speaker and consultant on this subject.
3. Reports on schools recently planned and constructed on the mainland which were embodying the latest concepts in educational trends. Reports and observations were made by Dr. James MacConnell, Masaru Tsugawa and James T. Okamura.

The Honorable Neal S. Blaisdell, Mayor of City and County of Honolulu, in the keynote address at the workshop stated:

"The State Governors' conference last summer (1960) conducted a symposium on educational needs and came to this central conclusion: that educational crisis is not entirely one of finances, but is chiefly a condition of out moded techniques and curricula.

Specialists at this workshop today are presenting the newest ideas in teaching, in utilization of television and audio-visual aids, and in the types of school buildings needed to carry out these programs.

With cooperation between all the agencies involved in the school construction program, we can give Oahu the educational facilities it needs to carry out its great responsibility as one of the most enlightened places of the world."

## RECOMMENDATIONS OF THE PROGRAM DELINEATION STUDY

The recommendations developed by the elementary and secondary committees of the Program Delineation Study were submitted to the Commissioners of Public Instruction by Dr. Deal Crooker in April 1961. The Commissioners accepted the recommendations of the Program Delineation Study groups and granted approval to implement the recommendations in the planning and designing of the two new schools, one in Hahaione Valley and the other in the Harbor Heights area.

The summaries of the Elementary Committee's recommendations, which worked very closely with the elementary schools, made clear the need of:

1. Teacher training program for elementary teachers in order to make possible the adaptation of newer educational concepts and methods especially in the areas of educational TV, team teaching, better staff utilization, elimination of grade concepts, and increased use of audio-visual media.

2. Program modification whereby more teachable groups could be developed. This could envision large group instruction, greatly in excess of the usual 32-1, pupil-teacher ratio and other groupings of less than 32 students per teacher. New professional classification was also indicated--the teacher assistant or paraprofessional.

3. Educational experiences of boys and girls to be planned and implemented by teams of teachers whose competencies and skills are mutually complemented.

4. Developing attitudes and creating desirable climate in the new schools which will foster implementation of new programs and a willingness to continually move forward in the search of newer methods to insure quality education.

The Secondary Committee strongly recommended that the new high school incorporate the following:

1. Team teaching--a promising and emerging approach to effective teaching and learning in subject areas that lend themselves to team teaching, thereby making optimum use of staff competencies and interests.

2. Non-Teaching period each day. Time to allow team members to plan and to prepare instructional material.

3. Modified program schedules. This will provide flexibility in student programming. This departure from standard schedules would mean:

    a. Students might not meet a period a day, five days a week, but might meet three times a week, every other day.

    b. Regrouping of students to provide time for large and small group instruction, as well as time for individual study.

    c. Programs to make possible for students to have variety of experiences appropriate to their needs, interests and abilities.

4. Instructional aids. The extended use of instructional aids

including open and closed circuit TV and teaching machines.

5. Teacher assistants and clerks. Help of non-professional nature to relieve teachers of routines such as policing, roll taking, correcting papers, preparing demonstration materials, setting up and taking down equipment and other similar duties which prevent teachers from teaching.

6. Modification of room design. Improve the present inflexible rectangular classrooms. Provide large group instruction areas.

# ADULT EDUCATION IN THE SECONDARY SCHOOL

Organization for Learning. The general purpose of the educational program is to provide for every child, youth and adult the kind and amount of education which will:

> "Help him to achieve the best growth of his abilities for useful living."
> "Give him a lasting understanding of our American cultural and spiritual background."

Policy - Physical Environment. School plants should be located, built and equipped to serve children, youth and adults. Important elements to be considered in the setting include:

Campus space
Size and form of the buildings
Size and arrangement of classrooms
Space for auxiliary services
Equipment for all activities

The grade levels to be accommodated and the possible use of the facilities by the community must also enter into the planning. (Ref: Instructional Policies and Implementing Programs for the Public Schools of Hawaii, Pg. 5.00)

Adult Education. Adult Education is an integral part of public education. The Department of Education is authorized to provide increased opportunity for the people of Hawaii, to include a program of less than college grade to be conducted, where feasible, in public school buildings and to use public school equipment.

The scope of this program includes elementary education, high school education and certification, citizenship training and courses to broaden the cultural, recreational and social interests of adults. Special programs may be established for meeting special needs, such as those offered for the veterans group which had to sacrifice some educational work to go on military duty. (Ref: Instructional Policies and Implementing Programs for the Public Schools of Hawaii, Pg. 5.02)

## Courses Offered

1. "Education about education," to keep parents informed as to developments which involve the children in the family and in school.

2. Family life education, to improve parents' vision and skill in implementing the classroom training of children in the home.

3. Civic education, to create greater awareness of parents to their responsibilities for the affairs of the community, not the least of which is "survival" in a troubled world.

4. Basic English language instruction, to provide a common means of communication.

5. Citizenship education to enable aliens to qualify for full American citizenship.

6. High school academic subjects, to enable adults to secure high school certificates.

7. Non-credit, or informal instruction in practical approaches to studying civic responsibilities, health needs, hobby development, preparation for family survival, preparation for retirement, etc.

Instructional Organization. Space should be made available for both day and evening instruction. Some small group meeting places will be commonly needed, as well as large auditorium space for mass meetings, lectures, movies, concerts, drama, etc.

In addition such facilities as library, science laboratories, shops, workrooms, commercial training equipment, etc. need to be shared by regular day and adult students.

All instructional equipment and audio-visual materials and equipment need to be shared.

Methods. Informal, rather than formal instruction will be the predominant approach. Instructional leadership will be divided between the school and the community. All modern teaching tools and techniques need to be available.

Curriculum Changes. Less formalized classroom work. More individual responsibility on the part of the adult student to do research on his own, once directed on the proper procedures.

Specialized Facility Needs. (In addition to regular classroom space.)

Office Space

Principal - minimum floor space - 16' x 18'

Access to secretary's office and to exterior of building.
Closed book shelves with sliding doors.
Bulletin board 4' x 8', with plastic transparent shield covering 50% of surface.

Secretary - minimum floor space 18' x 20'

Counter surface minimum width 28", micarta top.
Access to principal's office and to interior of building.
Closed flat boxes for teachers, 10" x 13" x 4", with access to teachers from outside, access to secretary from inside.
Built-in cabinets and drawers for current office supplies.

Conference Room

Minimum floor space - 20' x 22'
Built with a sliding door as a divider, so it may be used as two small rooms or one large one.
Equipped with two tables - each large enough to seat six, so the tables may be used together or separately.
Two double electrical outlets at opposite ends of room, flush with floor.
Room may be used for counseling, guidance, testing, previewing films, filmstrips, tapes, and recordings.

## Book Store

Minimum floor space - 14' x 16'

Open book shelves from floor to ceiling on two walls.

Counter space 28" x 8', micarta top, with access to outside lanai, fool-proof windows with metal bars. This space would serve as book storage as well as book store. We could have our book supplies in order and accessible, instead of stacked high in cartons.

Closed cabinets for storage of office supplies. Such a facility as this would greatly enhance our ability to better care for, conveniently sell, and accurately inventory the books and supplies.

## Two Multi-purpose Rooms

Minimum floor space - 30' x 50', wooden floors.

Piano in one of the rooms.

Stage in one of the rooms, 30' x 18', in addition to the floor space for the room itself. This is not envisioned as the main stage of the school, devoted to public performances. Its function would be devoted to dramatic and theater group classes of adults in the evenings. It would also function as an auxiliary facility available for day school rehearsals and would relieve the tremendous pressure and difficult scheduling that is constant in the cafetorium. It could be used by adult groups in the evening for community chorus, and by day school groups for instrumental and vocal musical programs.

Two such rooms would make for flexible scheduling of adult evening groups for square dancing, social dancing, all types of musical instruction, and would even open the door for community symphony groups.

## Two Multi-size classrooms

Removable partitions or sliding doors or accordian doors planned for use of the room as a whole or possible division allowing for the simultaneous use of one, two or three or four small rooms. Such flexibility is exciting to contemplate, when you think of the possibilities of developing group dynamics with adults. It would be equally valuable to secondary teachers.

## Night Lighting

Flourescent tube fixtures, unless there is something better by that time, with adequate provision for all areas. This includes all classroom space, offices, lanais, lavatory facilities, and parking areas. The parking area should be provided with flood lights or spot lights or both. These should be available at all times when cars are parked on the campus.

## TV Facilities and Language Laboratories

Make these facilities available for the use of adults in the evenings.

## Reading Laboratory

Designate one classroom designed specifically for this purpose. Concentrate all books, equipment, and other related materials used in the program and provide adequate closed cabinets to store and care for it. Have a reading specialist in charge of the program and provide storage space which can be designated for evening school use.

### Storage Space

Designate a small part of storage space in certain rooms for the use of adult students in the evening. Our program would be greatly enhanced if this were done. It is needed in these areas:

Art room - 15% of all storage space
Kitchen - 10% of all storage space
Wood shop - 20% of all storage space

### Strengths

1. Close association between parents and school staff will enhance the learning activities of school children.

2. Mutual understanding of the problems of an individual student by teacher and parent will help in the development towards educational objectives.

3. Maintaining an interest of the parents in community problems, the development of school facilities, the support of the educational staff, the capacity to meet, discuss and solve home and school relations problems will be beneficial to the life and growth of the community.

4. Awareness of the adults' responsibility for the betterment of the community (civic affairs, delinquency, school drop-outs, leadership, employment).

### Problems

1. How to provide for daytime adult classes.

2. Filling the need for daytime learning (suspensions, drop-outs)

3. How to provide for employment retraining.

4. What to do with the babies. (nursery?)

5. How to provide facilities for joint use.

    a. Added space for adult personnel use (classrooms, office, parking, communications system, teaching equipment, library, commercial machines, job equipment).

## AGRICULTURAL ARTS

I. Objectives

  a. Acquire basic knowledge of plant culture

  b. Develop appreciation of plants--its beauty, design, color, and its relationship to all citizens

  c. Study plant identification

  d. Know common use of plants

  e. Promote leisure time interests and hobbies in plants

  f. Adapt designs and plant science in everyday living

II. Major modification in content

  a. Shift of emphasis from vegetables, poultry and livestock curriculum to horticulture, floriculture, tropical fruits, landscaping

  b. Integrated course in agricultural arts, industrial arts, family living, required in one grade level

III. Learning activities

  a. Plant culture

  b. Plant identification

  c. Plant usage

  d. Landscaping - designs, color harmony, sequence

  e. Diseases - identification and control

  f. Insects and other pests - identification and control

IV. Teaching methods

  a. Demonstration by teachers and specialists

  b. Laboratory work and student participation

  c. Classroom instruction

  d. Student experimentation

  e. Visual aids

  f. Field trips

g. Application of acquired skills and knowledge in home and community

h. Team teaching with science, biology, zoology, botany, home-making, and art classes in the area of plant, soil science, diseases, insects, and pest control

V. Evaluation, experimentation and research

a. Evaluation of Agricultural Arts curriculum

b. Experiment in team teaching

c. Research on horticulture, floriculture and landscaping curriculum

VI. Pupil rate of learning

a. Recognize individual differences

b. Instruction geared to variation in ability

c. Instruction provided in groups and to individuals

d. Students of all abilities find opportunities for self expression and creativity

VII. Organizational patterns

a. Staffing patterns

1. One qualified Agricultural Arts instructor for 8th or 9th grade

2. Traveling Agricultural Arts instructor to assist in-service teacher

3. The Agricultural Arts instructor be assigned to the science program for periods other than in Agricultural Arts

4. Custodial aide to assist the Agricultural Arts instructor in maintaining and growing of plants

5. Two qualified Agricultural Arts instructors for 10th to 12th grades in plant science

b. Grouping patterns

1. Classes in horticulture, floriculture, landscaping, to be offered as an elective for boys and girls in the 10th, 11th, and 12th grades for second science credit

2. Schedule - 5 periods per week

3. Teacher's schedule - 1 period per day--for planning, guidance, follow-up

c. Use of instructional materials and equipment

   1. Study by use of actual material whenever possible

   2. Use of TV, movie, slides, filmstrips, overhead projector, opaque projector, charts, models, specimens

   3. Plant resource center shall be established with full-time custodial aide

VIII. Facilities

a. Classroom - horticulture

   1. Demonstration table with sink

   2. Display cabinets

   3. Counter and storage

   4. Attached boys and girls toilets, tool room, storage room

   5. Space and facilities for audio-visual equipment and visual aids, overhead screen and accordian curtain on tracks

b. Laboratory with work benches, potting tables, sink, storage bins

c. 3,200 sq. ft. of lathhouse complete with automatic irrigation system including solenoid valves and time clocks, as well as electric lights and outlets

d. Outdoor storage bins for soil and potting media

e. 10,000 sq. ft. of outdoor planting area with paved walkways and automatic irrigation system

f. Fencing to enclose Agricultural Arts units--buildings and growing area

g. Establish various garden areas on the school campus as pilot landscape designs

h. Audio visual equipment--slide projector, movie projector, opaque projector, overhead projector, film-strip projector, models and specimens

i. Tool room

# AGRICULTURAL ARTS

| Major Content Modifications | Staffing | Pupil's Schedule | Teacher Programs | Equipment - New | Facilities - New |
|---|---|---|---|---|---|
| Grade 8th or 9th Agricultural Arts 1 semester or one year required | 3 full-time Ag. teachers<br>1 custodial aide | Large group instruction<br>Twice a week | A planning period for each or 3 regular teachers (1-25 ratio) | TV monitors<br>Slide projectors<br>Movie " | Laboratory with work benches, potting tables, sink, storage bins |
| Shift of emphasis from vegetables, poultry and livestock curriculum to horticulture, floriculture, tropical fruits, landscaping | 2 aides to tchrs. (5th yr. Ag.)<br>*1 intinerant teacher | Small group instruction and laboratory<br>Twice a week (15-20 group)<br>Independent study Once a week 43-50 minute period | | Opaque "<br>Overhead "<br>Film strip "<br>Models & specimens<br>Display cabinets<br>Curtain tracks & accordian curtains | Tool room<br>3,200 sq. ft. lath-house complete with automatic watering system, including solenoid valves and time clocks, as well as electric lights and outlets |
| Integrated course in Ag. Arts, Indus. Arts, and family living required in one grade level | *Works with science teachers, handles certain units in science classes, etc. | Elective courses in horticulture, floriculture, landscaping, shall be accepted as a second science credit for 10th, 11th, and 12th grades | | Soil sterilizer<br>Germination equipment--autoclave, pressure cooker, hot plate<br>Spraying equipment<br>Outdoor storage bins for soil and potting media | 10,000 sq. ft. of outdoor planting area with paved walkways and automatic irrigation system<br>Fencing to enclose Ag. Arts units--buildings, and growing area<br>Establish various planting areas on the school campus as pilot landscape designs |

# ART

I. Specifications

1. A large unit of classrooms with provision for a multi-purpose room for the following: Art, Home Economics, Industrial Arts including Mechanical Drawing, Dramatics including Theatre Craft, and Music

    a. Four Art Rooms to accommodate 15 or 20 pupils, each room fully equipped for the following art areas, including a small conference room **within each room separated by glass**
    Used also by teachers and parents afternnon or evening

        (1) Drawing and Painting
        (2) Advertising Arts and Graphic Arts separated by a partition
        (3) Ceramics
        (4) Crafts and Metal including Jewelry separated by a partition

2. Display Areas in classrooms, halls or corridors and multi-purpose room

3. Multi-purpose for the large unit (not the school auditorium)

    a. Movable walls make this possible or
    b. Large central multi-purpose room

II. Scheduling of Teachers (flexible)

1. Eight well-trained art teachers to plan, teach, coordinate and act as consultants

    a. Rotate as master teacher and department chairman
    b. Teach the area in which each has the greatest strength and interest
    c. Correlate with teachers of other subject areas in the following:

| Group Size | | |
|---|---|---|
| Small or Individual | (1) | Dramatics - design of costumes and scenery |
| Any Size | (2) | Wood Shop - design of furniture, buildings and homes |
| Any Size | (3) | Home Economics - fashion design and interior decoration |
| Small | (4) | Music - expression in drawing and painting |
| Small or Individual<br>Art center in classrooms | (5) | Social Studies, Language Arts, Foreign Languages and Science - drawing and painting including murals, illustrated maps, charts, posters or crafts |
| Large | (6) | Social Studies including History, Literature and Foreign Languages - appreciation of our heritage of art of all cultures and ages, Occidental and Oriental |

    d. Prepare exhibits at the school, in the community, to send to national exhibits and to foreign countries

    e. Available to parents and community groups in helping them solve their art problems

2. Six Intern teachers (majors in art)

   a. Work with art specialist where needed either in a homeroom or in the art center
   b. Assist in care and distribution of equipment and supplies

III. Scheduling of students (flexible), size of groups and lengths of classes to vary from day to day because of differences in abilities, interests and experience in art

1. After students have explored art in grades 7 and 8, two semesters of art to be required in either the 9th or 10th grades (area of choice from the list of elective courses in the Art Guide, pages 29 and 30). All other students may elect courses of their choice.

   a. 15 or 20 students to a class and large groups when necessary
   b. 65 periods a week, each 25 minutes in length, 13 of these periods for each five days of the week

      (1) Length of class to vary according to needs: maybe 25 minutes to finish a painting, 50 minutes or longer for small or large group work
      (2) Length of class longer, but only 2 or 3 times a week
      (3) Time allotted to vary according to art area and student maturity

2. Gifted students and/or those with special interest

   a. Scheduled or allowed to go on own initiative when possible

      (1) Increased responsibility in self direction

IV. Activities, Methods, Evaluation

1. Team Teaching

   a. Art teachers plan together as a team in making tentative and flexible plans (or course of study) for elective courses based on the needs, interests and experience of the students
   b. Each teacher of a certain area, say Ceramics, then plans with the students and may make changes
   c. Art teachers plan with teachers of other subject areas for correlation suggested under "Scheduling of Teachers"
   d. Plan with all teachers to use art as a living integrating force for enrichment and not as an isolated subject; use art to help students grow in ability to create, think and solve problems and use materials and tools

      (1) Art with consideration for each student's ability, experience and rate of learning
      (2) A method of grading other than A, B, C, etc., except for those going to a university

e. Check with requirements of the University Art Department as to requirements for a student wishing to major in art, plan and advise these students and give these talented students extra work

f. Plan together with teachers of other subject areas for large group instruction in the following:

  (1) Motivation to new art activity or hobby
  (2) Design in everyday living for development of aesthetic judgment in choice of consumer goods (development of good taste in dress, home furnishings, etc.)
  (3) Appreciation of art for enrichment
  (4) Presentation of opportunities for vocations to whole school: commercial photographer, artist, teacher, commercial artist, industrial designer, architect, fashion designer, interior decorator, landscape artist

g. Plan for small group instruction

  (1) Discussion and evaluation by students and teacher
  (2) Students work at art activity where scheduled
  (3) Students learn to get along together, help each other, make suggestions

h. Evaluate art program and art work of students

  (1) Where to improve
  (2) Where to change

2. T.V. Teaching both closed and open circuits

  a. Appreciation of art
  b. Motivation and demonstrations
  c. Background material for correlation with social studies, literature, ballet, etc.

3. Use of Community Resources as an integral part of art education

  a. Honolulu Academy of Arts

Appreciation
Correlation with other subject areas
Demonstrations of art activities
School Art Exhibitions
Cultural exhibitions of art for all periods in history
Staff of Academy as consultants in the new audio-visual program and for the teachers
Mobile Unit for exhibits of both two-and-three dimensional art work

b. Bishop Museum

Study of Hawaii and other peoples of the Pacific
Use of the Department of Education liaison teacher
Use of museum in miniature

c. Excursions or individual visits to museum and gallery exhibits of art in community
d. Talks and demonstrations by artists and craftsmen

V. Equipment and Storage to be shared

1. Audio-visual equipment

overhead projector
16 mm. film projector
slide and filmstrip projectors
tape recorder
opaque projector
large wall screen
rostrum (portable)
P.A. system
Microphone
T.V.
Record Player

2. Central storage for an adequate collection of films (unless a state pool is provided), slides, filmstrips, and reproductions of art
3. Stock storage next to art center for supplies for both two-and-three dimensional activities
4. Storage for art supplies for each art room

VI. Curriculum Changes

1. To keep up with current trends

VII. Accomplishment of the following objectives on p. 7 of the Art Guide as follows:

1. The outstanding function of a program of art education for all young people must be to assist them to arrive at a well-balanced creative, intellectual, physical, moral, spiritual, emotional and social maturity. In order to achieve this end, the art program should function as follows:

Provide opportunities for building spiritual values by fostering artistic development.
Encourage creativity by providing opportunities to express and create.
Develop greater powers of detailed observation and visual judgment
Help pupils to develop self-awareness, self-direction, self-confidence and a series of responsibility.
Help all pupils to achieve their highest potentials.

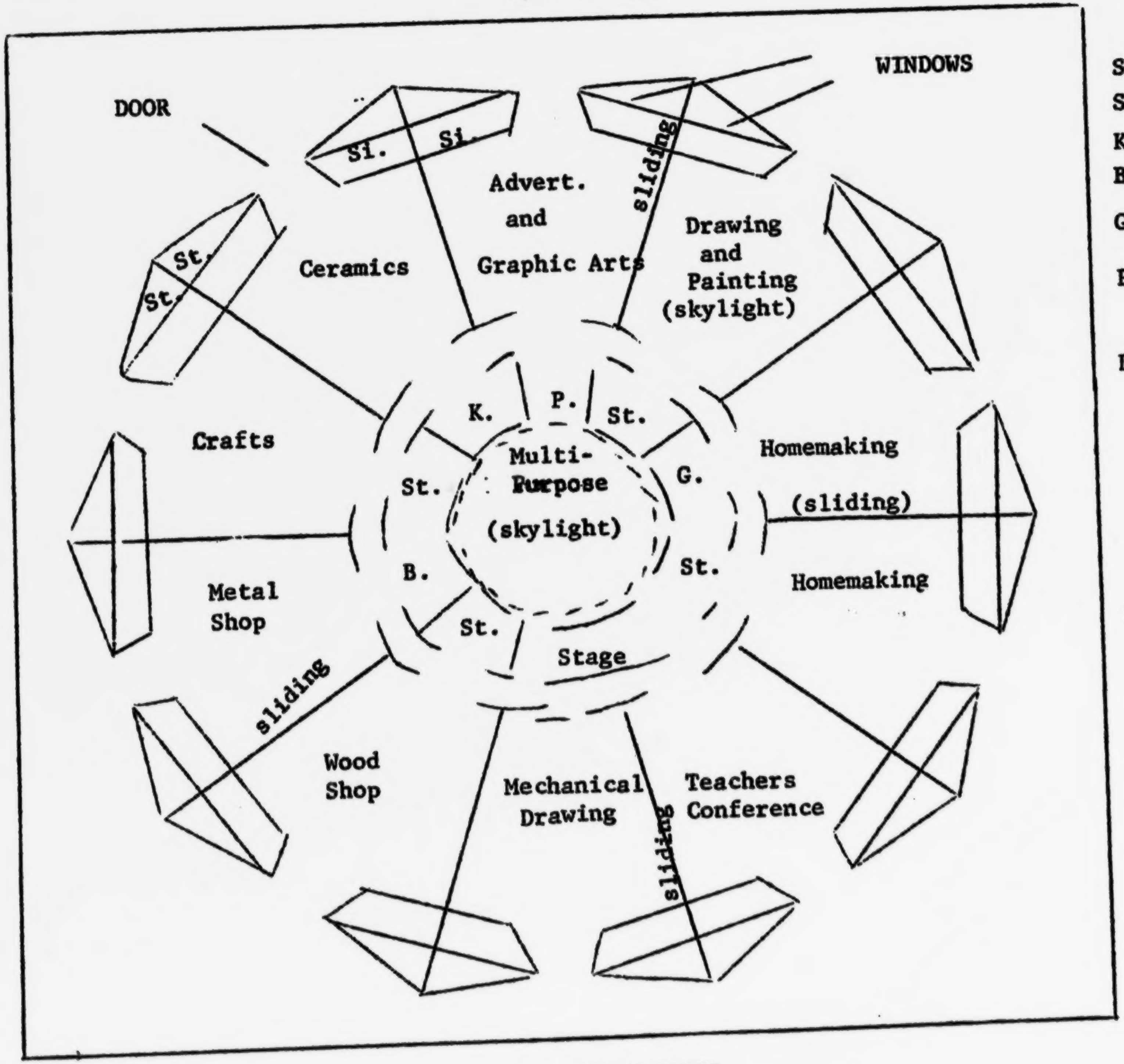
## VIII. Anticipated Problems to be considered

1. Cooperation of the Art Department of the University of Hawaii and the College of Education for the training of art teachers geared to the new trends in education:

    a. More training in art
    b. Intern program for art majors

2. Orientation and in-service training of teachers in service
3. Education of the public, parents, teachers and children for cooperation in accepting the new trends and methods

SQUARE ROOF


WINDOWS
DOOR
Si.
Si.
St.
St.
Ceramics
Advert.
and
Graphic Arts
sliding
Drawing
and
Painting
(skylight)
K.
P.
St.
Crafts
St.
Multi-
Purpose
(skylight)
G.
Homemaking
(sliding)
Homemaking
B.
St.
Metal
Shop
St.
Stage
sliding
Wood
Shop
Mechanical
Drawing
sliding
Teachers
Conference

AIR CONDITIONED

St. - Storage
Si. - Sinks
K. - Kiln
B. - Boys
G. - Girls
P. - Passage

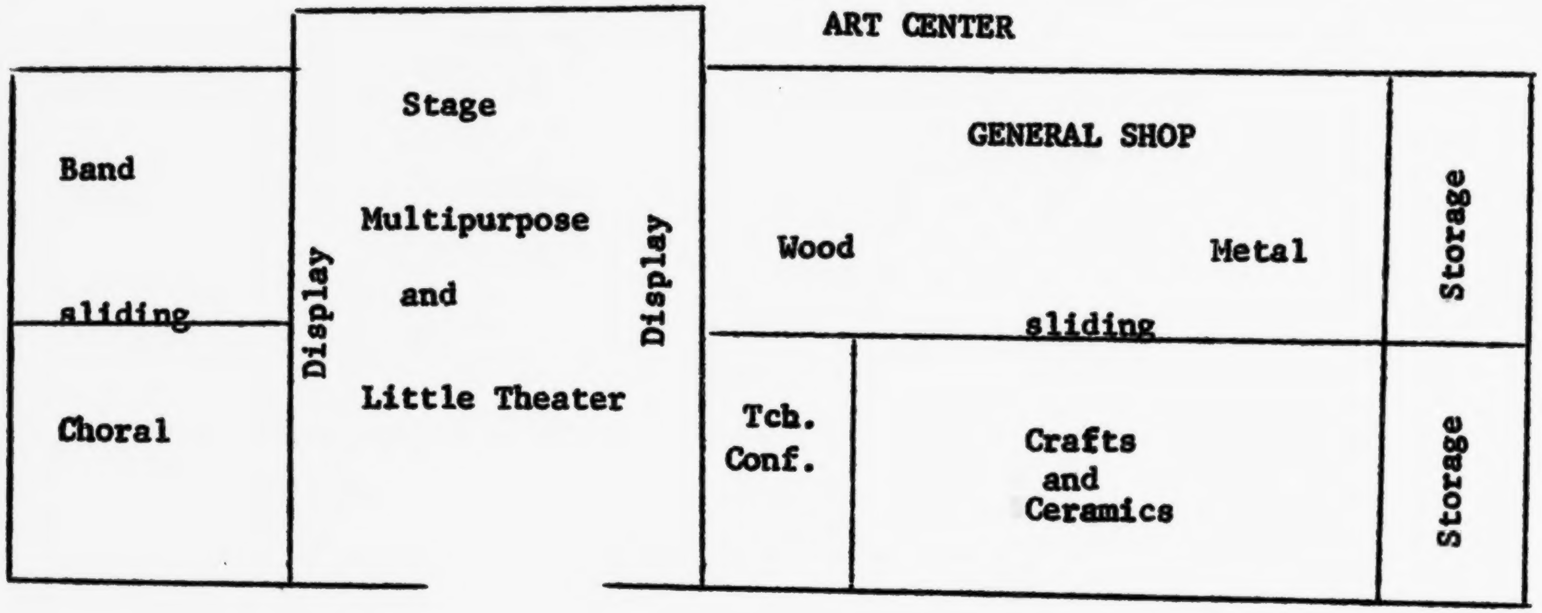
**Alternate all way around**

Dotted line in center    Curtain track

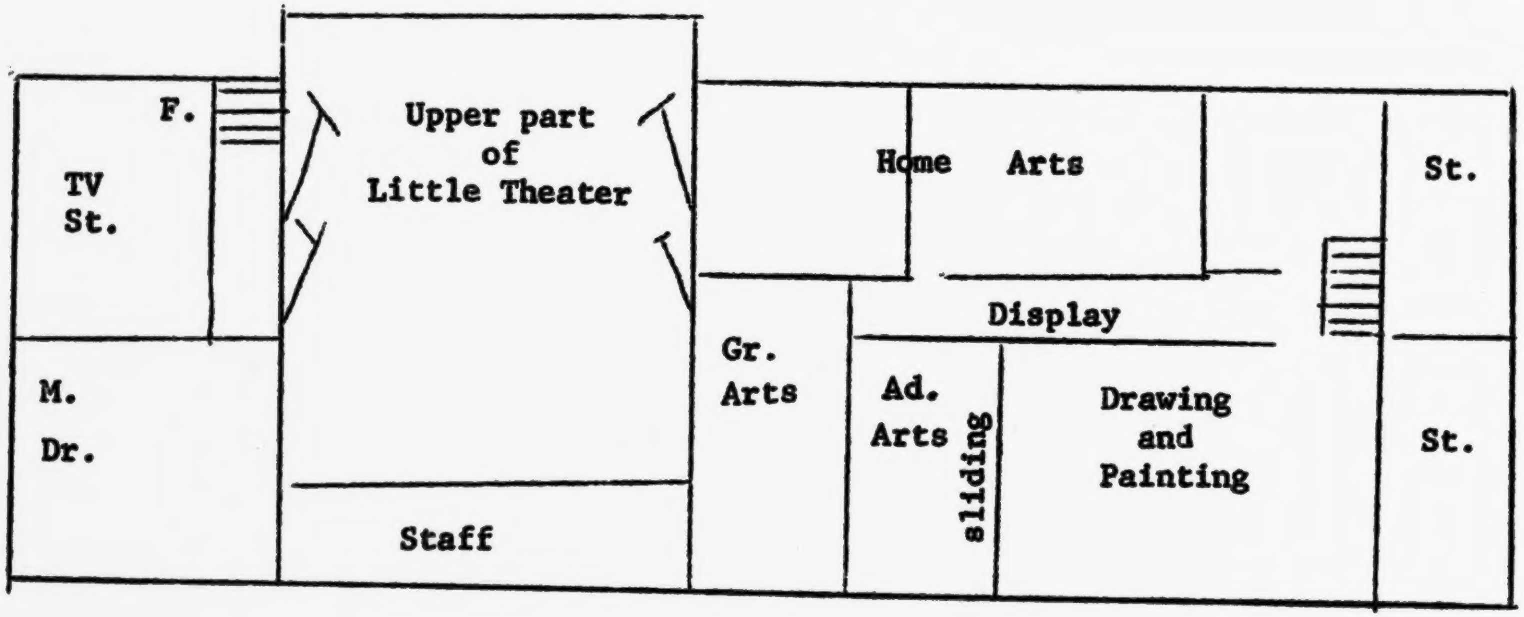
If no air- conditioning, have open court in center.

# FIRST FLOOR

## ART CENTER


Stage
Band
Multipurpose
and
Little Theater
Display
Display
sliding
Choral
GENERAL SHOP
Wood
Metal
sliding
Storage
Storage
Tch.
Conf.
Crafts
and
Ceramics

## SECOND FLOOR


F.
TV
St.
M.
Dr.
Upper part
of
Little Theater
Staff
Home Arts
Display
Gr.
Arts
Ad.
Arts
sliding
Drawing
and
Painting
St.
St.

M. Dr. - Mechanical Drawing
F. - Films and equipment
St. - Storage
Gr. Arts - Graphic
Ad. Arts - Advertising

# BUSINESS AND DISTRIBUTIVE EDUCATION

Each day our society demands of each individual more, newer and deeper understandings and better and more varied skills, greater flexibility and, at the same time, higher specialization. In Hawaii, the population increased nearly two times that of the national rate in the last five years. This was responsible for the opening of 5 new shopping centers, a 65% increase in employment in the areas of finance, insurance and real estate, and a 26% increase in service industry. Retailing alone has been in excess of $600,000,000 a year and employs 32,000 people.

Are our schools meeting our obligations to society? Is the supply of adequately trained young people sufficient to meet the demands of our economy. Society demands more and better NOW. We must all be effectively productive. Teacher time must be spent in guiding and instructing so that student learning may be meaningful. The curriculum must develop basic and specified understandings and skills. Our economy is based on industry and business. What would happen to our electronic activities if there was no one skilled in distributing and selling their products, no one capable of gathering, recording and disseminating information?

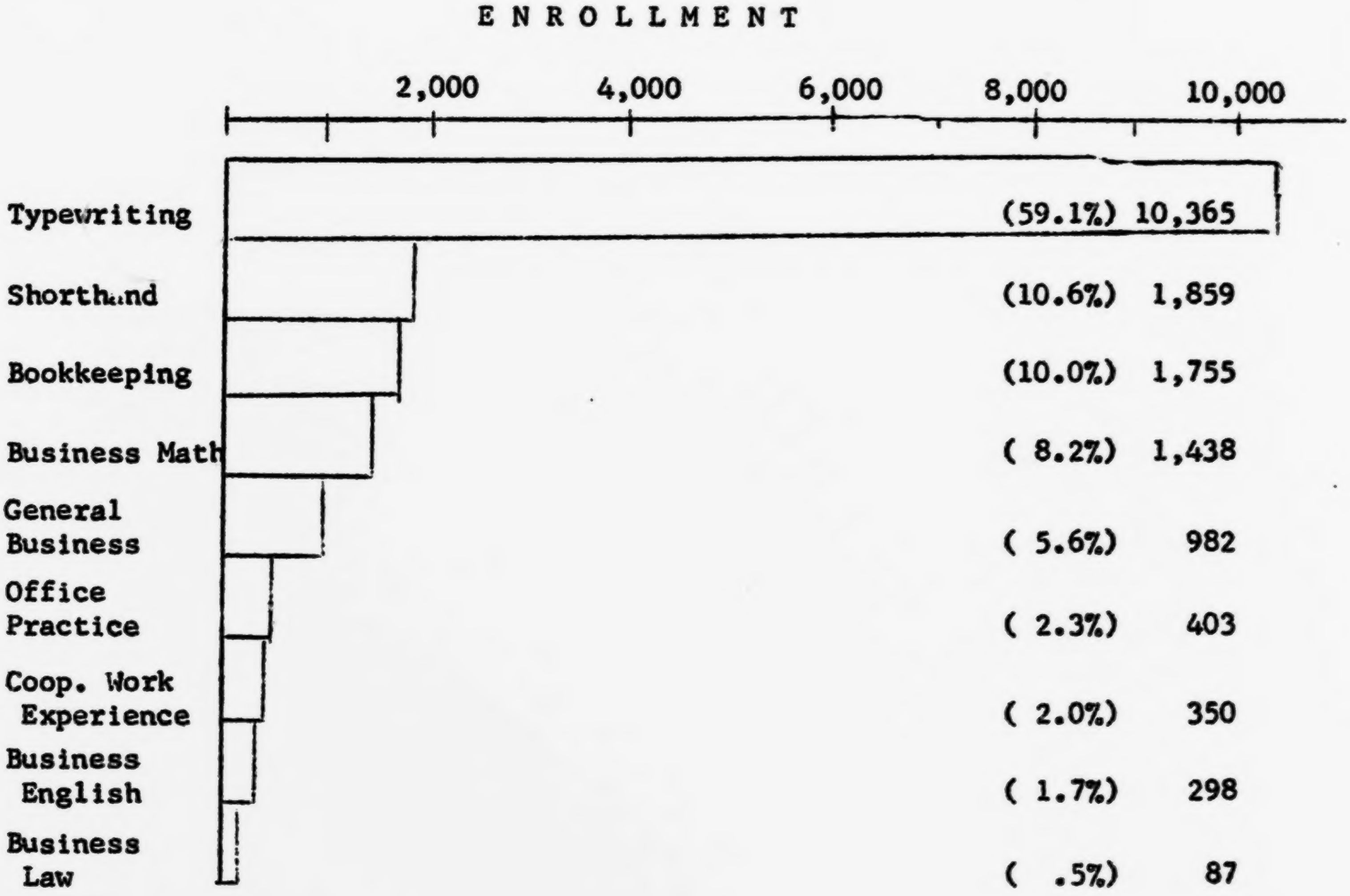
According to the Department of Labor and Industrial Relations report, the clerical and distributive occupational group comprises the largest segment in the labor market today and all employment forecasts indicate that this single group will continue to increase its lead for the next 5 to 10 years.

The secondary school business education curriculum must be strongly vocational as well as academic to include at least the minimum essentials for a job or a profession in the field. It must meet the needs of every student who can profit from the experience of a business education and, as such, must be developed around sound guidance principles. It must be a cooperative venture with schools, business, parents, and it must be an outgrowth of community needs. It must be organized as an INTEGRAL PART of the total school curriculum, and it must function as an integral part of the school in order to develop in students the appreciation and value of each individual and of useful work well done. The teacher must teach, the student must assume the responsibility of learning to the highest of his potential, and the school must provide all that makes for the best in teaching and learning.

In meeting the "vocational efficiency" objective of public education in Hawaii, instruction in Business Education is offered in the curriculum which contributes to the knowledge, skills, and attitudes required by students seeking careers in business. Such instruction provides (1) specialized occupational training through the development of marketable skills necessary to qualify high school graduates for employment in the distributive and office occupation fields and (2) general training in business for curriculum enrichment for students seeking basic skills in this area for personal use. At the same time, the Business Education curriculum encompasses information and abilities of personal and citizenship value to everyone; as evidence, General Business and Typing.

## SCOPE OF PROGRAM

A composite total of 17,537 students are presently enrolled in Business Education courses. This represents more than 50% of the total student population on the secondary school level, e.g., grades 9 through 12. The following Bar Graph presents a breakdown of student enrollment in the various courses in Business Education:



## MAJOR MODIFICATIONS IN CURRICULUM

The American economy has always been an economy of commerce. Since the historic beginning of the United States is based upon individual rights and liberties, the economy has always followed the concepts of the philosophy of the free enterprise system. It is therefore proposed that GENERAL BUSINESS or PERSONAL ECONOMICS (a course covering activities which the entire population engages in daily either as a consumer of, a worker in or an entrepreneur of a business, and embodying such units as governmental, social, and economic relationships in business, personal finances, insurance, communication, transportation, and consumer information) be required of all ninth graders in order to develop an understanding and appreciation of our free enterprise economy.

For students planning to further their education on the collegiate level, it is recommended that the following Business Education courses be offered for the curriculum enrichment of these students:

| | |
|---|---|
| 1. NOTEHAND: | A one-semester, personal-use, easy-to learn writing method designed for those interested in acquiring the techniques of making useful notes more rapidly and easily than he could with longhand from reading, lectures, discussions, and in reviewing and preparing for examinations. |
| 2. MACHINE CALCULATIONS: | A one-semester course designed primarily for students of higher mathematics who are interested in acquiring the techniques of using the calculator for faster and easier problem solving. |

## KEY-LEARNING ACTIVITIES

A. ETV

Typewriting, Bookkeeping 1-2, Shorthand 1-2, Business Mathematics, General Business, Cooperative Office Training, Cooperative Distributive Training, and Office Practice may be taught via closed-circuit TV. Open-circuit TV may be used for Typewriting, due to the large enrollment.

B. Team Teaching

1. Team leaders will present new material daily over closed-circuit TV, using demonstration and lecture methods.
    a. Television camera will transmit the TV presentation to viewing screens in the classrooms in the business education department.
    b. Daily presentations will be filmed, to be processed into 16 mm film which will be shown to the rest of the classes for the remainder of the day.
    c. This will then provide time for the team leader or studio teacher for planning and preparation.
    d. The TV presentation will also be taped to be used by absenteesand for later review.
2. A classroom teacher will be in charge of every class viewing presentation.
    a. He will observe students at work to see that they are using proper techniques and following the instructions of the television teacher.

b. He will also answer student questions.

c. After the TV presentation, the classroom teacher will be responsible for follow-up work, which should provide necessary help for individual differences and a wide range in student ability and achievement.

   (1) More "paced" drills may be given, using the Tachistoscope.

   (2) Further clarification of instructions may be given, using the opaque or overhead projector.

   (3) Especially slow or fast students and absentees will have the use of the tape recorder with headphone listening center to review or to progress ahead of class.

## ORGANIZATIONAL PATTERNS

### 1. Staffing

**Typing 1-2 and 3-4**
(15 classes)

1 Team Leader
4 Professional Teachers
1 Clerical Aide

**Bookkeeping 1-2**
(5 classes)

1 Team Leader
6 Professional Teachers
1 Clerical Aide

**Business Math**
(5 classes)

1 Team Leader
6 Professional Teachers
1 Clerical Aide

**Shorthand, Notehand**
(6 classes)

1 Team Leader
6 Professional Teachers
1 Clerical Aide

**General Business**
(15 classes)

1 Team Leader
6 Professional Teachers
1 Clerical Aide

**Cooperative Office Training, Cooperative Distributive Training, and Office Practice**

3 Professional Teachers - each to serve as team leader in own specialty.

Various specialists in industry for TV presentations.

3 Clerical Aides.

## 2. Grouping Patterns

### Large Groups (40%)

| | |
|---|---|
| TV presentations | 100 - 200 students |
| Explanations | 32 |
| Planning | 32 |
| Group Study - panels, etc. | |
| Generalizations | 32 |
| Evaluations | |

### Individual Study Groups (40%)

(32) (2 - 3)

Read
Listen to recordings, tapes
View, question, analyze, think
Experiment, practice
Investigate, examine
Create

### Small Discussion Groups (20%)

(For Business English and Business Law)

Group examination of terms and concepts
Problem solving
Conferences

## 3. Schedule for students

| | |
|---|---|
| Bookkeeping | 3 periods a week - 100 minutes each period for lecture and laboratory. |
| Office Practice)<br>Shorthand 3-4) | 90 - 100 minutes daily |
| All others | 45 - 50 minutes daily |

## 4. Schedule for Teachers

a. Professional teachers (except teacher-coordinators)

4 assigned teaching periods per day
2 periods for conferences and preparation time with team leader, and student conferences.

b. Team Leader

A maximum of two presentations over closed-circuit TV daily.

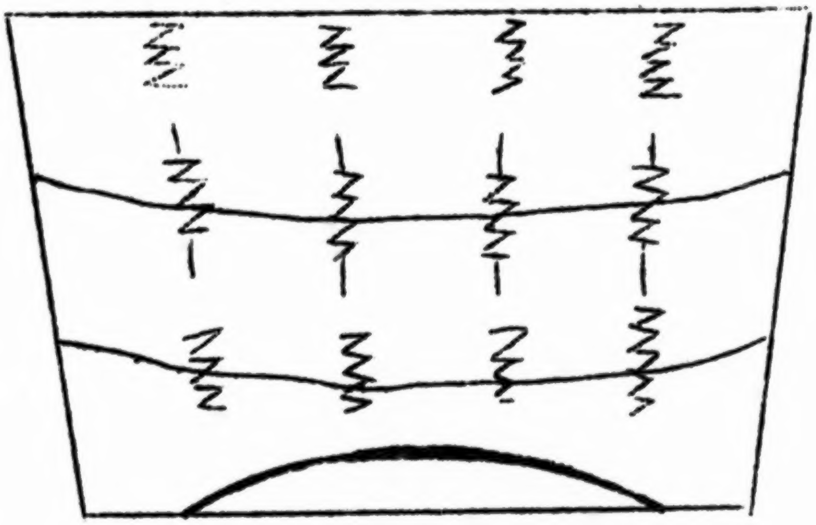
## 5. Facilities and Equipment

For instructional use and independent study, the following facilities and equipment should be provided:

a. TV studio properly equipped, with talk-back system from viewing classrooms.

b. Classrooms

(1) Large viewing room with individual work desks to accommodate 200 students.



(2) Dictation-listening laboratory

(3) Other classrooms as provided for in EDUCATIONAL SPECIFICATIONS, VOL. II.

c. TV 24" or 29" - 2 per study group
d. TV Camera - for audience reaction for lecturer
e. Screen, hanging from ceiling away from wall to prevent distortion for overhead projector.
f. Light control - blackout and dimmer switch
g. Blackboard - metallic
h. Bulletin Board - cork, portable
i. Acoustic walls and ceiling
j. Audio built into the P.A. box with jacks to hook up tape, phonograph, and Microphone
k. Many electrical outlets to accommodate adding machines, teaching machines, projectors, etc.
l. Movie projector - 16 mm sound
m. Filmstrip and slide projector
n. Opaque projector
o. Overhead projector with 7x7 plate and Tachistoscope attachment
p. Prepared transparencies
q. Stand-up microphone
r. Portable microphone
s. Phonograph - 4-speed, transcription
t. Tape recorder - 4-track, with headphone listening center attachment
u. Teaching machines 1 per 10 students
v. Bookkeeping charts
w. Business machines
x. Tables for machines
y. Demonstration stands
z. Dictation-listening laboratory

# FOREIGN LANGUAGES

The following recommendations for the elementary and secondary education in the area of Foreign Languages are made with fall 1963 as an operational target date.

## I. Staff Utilization

A. The chief school administrator responsible for instruction should be the "CURRICULUM AND INSTRUCTION DIRECTOR" whose responsibilities will be all those which are implied by the title and whose rank and salary will be at the top level of the school organization. All those business managements and other duties related to the mechanical operation of the school ordinarily performed by the school principal will be the job of the "SCHOOL MANAGER" whose rank and salary will be at the same level of the Curriculum and Instruction Director. Together these two people will make up the ADMINISTRATION TEAM. All clerical and business duties ordinarily performed by the present vice principal will be handled by a "para administrator" whose salary and rank will be at the third level. The second level position will be held by the ASSISTANT CURRICULUM AND INSTRUCTION DIRECTOR who will also be a part of the "administrating team." A curriculum and instruction council will include department or grade level chairman as regular members with counselors and special services staff members participating as desired. The Curriculum and Instruction Director is the chief administrator in all matters related to curriculum and instruction and as such is responsible for all final decisions in these matters. The Curriculum and Instruction Director will coordinate all related activities with the school district Curriculum and Instruction office which in turn will work with the state Curriculum and Instruction division. Department and grade level chairmen must receive a salary differential which is motivational and commensurate with their responsibilities.

### B. Teacher-Specialists

Using foreign language as an example, these are teachers with a special subject competence who may work in more than one school such as the traveling teacher-specialists in Frontier Project Asian Languages, Elementary Schools and the traveling teacher-specialist who will be teaching Russian language in two or more secondary schools, fall 1961. In addition, the specialist may remain on one campus, teach the necessary periods in the area speciality and serve as a team-teacher consultant for other areas. An example of this would be the Hawaiian language teacher in one of our high schools who teaches Hawaiian language classes part of the day and during other portions of the day serves as a Hawaiian culture specialist working on units of study to be presented in regular social studies classes, English and speech classes, music and art classes. These units of work are developed by the specialist and the regular classroom teacher. The main body of special interest is very often presented by the specialist with the specialist and classroom teachers serving as a team in sub-group activity. It is obvious that not only are the students having an opportunity to learn but this is customized inservice training for the regular classroom teacher as well. In the elementary schools program, it is the attempt of the traveling teacher-specialist to teach classes of students as needed, and in subsequent years as the regular classroom teacher is able to carry on, to allow her to do so. At no time will the specialist leave the school to handle its own program completely. When a school is ready to operate independently the specialist is free to work in other schools much of the time but still continues to visit and even give specific instruction on occasion. This is a semi-supervisory position and deserves motivational and commensurate salary differential.

## II. Equipment

### A. Learning Machines

There is no question that learning machines can serve a fine purpose for specific kinds of skill development and certain information memorization. Generally speaking, since language is a living, vibrant, dynamic, elastic, ever-changing manifestation of human life, over-mechanization of instruction will defeat the very aim of that instruction--HUMAN UNDERSTANDING. Examples of specific application of proto-type learning machine in language might very well be in intensified and increased acquisition of reading vocabulary such as advanced Chinese or Japanese literature. Where deemed advisable, reading speed could be increased perhaps through such machines. Caution: Grammar is essentially a formalized analysis of a language. Though we frequently hear people speaking of rules of grammar, in almost all cases the spoken language and its extensive development precedes someone's structured analysis of how that language operates. In other words, you can't analyze something until you have it. This is the basis for the present trend in American language instruction to develop a foundation in the listening and speaking language followed by reading and writing, and in advanced phases, an analysis of the language. Therefore, it is sort of ridiculous to think of learning rules of grammar and then memorizing bilingual word equivalents and then attempting to put words into certain sequences according to memorized rules with the assumed result that one can use the language. It is probably true that a mechanical learning machine can help a student memorize rules of mechanics of a language. For example, the rote memorization of conjugations and declensions could undoubtedly be facilitated through the machine.

### B. Advanced Learning Machines

Undoubtedly a $5000 single student installation could be developed to include everything but the protoplasm and it would be of great value as a non-human tutor ("...like a kiss over a telephone.") But when the time comes that people think of spending $5000 for each student in a 30 pupil classroom, we will be in a good position to consider better possible utilization of such quantity of money.

### C. Audio Equipment

#### 1. The Tape Recorder

The audio tape recorder is the teaching-learning machine for language instruction. Every language classroom today must have a record player and a tape recorder. There should also be provisions made for listening through earphones for at least half of the class. Though there is advantage in having the wiring for listening built into wall installations, yet, with each degree of immovability of equipment comes a loss of flexibility in terms of classroom activity. The value of such a system as the Classroom Audio System now in use in Hawaii is that it allows the teacher to move desks, chairs, tables to any part of the room for any type of sub-group activity and be able to set up listening position in any place he wants. At the same time two to five low-cost tape recorders may be placed in a specific area of the room where students may use these instruments for individual work in listening and speaking as well as other skills combined. Again, as these tape recorders may desirably stay in one place nevertheless they may be moved about anywhere in the room where different positioning is desired.

A portable battery operated tape recorder should be available to every classroom teacher when needed for the purpose of making "on location" live situation recordings of materials to be used in the classroom. Such equipment might easily be made available to a student or students for special projects. For example, a student might record a foreign language conversation held in his home with a grandparent. The Classroom Audio Center System provides simple patch cord for recording from the midget tape recorder onto the regular tape recorder or from the record player into the tape recorder or any other combination. The large loud speaker of the record player with its own amplification system allows for full-scaled use of any recorded material played loud enough to fill an auditorium.

Provisions should be made for tape recording automatically, through the use of a timer, any radio or TV programs which may provide useful learning material that was broadcast during non-school hours. Such a system is relatively inexpensive and can provide wonderful class content ordinarily lost. (It is one thing to ask students to "be sure and listen to such and such TV or radio program, tonight" and another thing to have it on tape for careful classroom study with as much repetition as needed and listen to it at any time desired.)

### 2. Video-audio Tape Recorder

Though this is not yet available at a practical cost for school use, within a few years a video-audio tape recorder at a reasonable price will be ready for use by creative educators. In the opinion of the Director of Foreign Languages, when this occurs the Curriculum and Instruction Director of every school will find at his disposal a "faculty" tripled or quadrupled that of his existing staff. The only machine which will provide a still great "breakthrough" will be the portable battery operated video-audio tape recorder of the future.

## D. Video Equipment

1. For regular classroom situations a slide and filmstrip projector should be part of standard classroom equipment

along with necessary screen and shading devices. These should be mechanically operated -- that is, automatic controls which would allow either manual or tape recorded in audible activation. Such equipment is now available at low cost.

2. The present overhead projectors are not necessary for every class. It is suggested that one for every two or three classes be constantly available so that material which could not be presented live at the blackboard might be presented through the overhead projector.

3. The present opaque projectors have serious limitations which make their frequent use questionable. Specifically, these problems include intensification of light, inability to handle easily, materials of various sizes and shapes and necessity for moving the machine itself in order to maintain full-size image on the screen. It is incumbent upon educators who are consumers for such equipment to insist upon improvement in certain equipment such as this machine.

4. A film projector with facilities for recording the teacher's own audio material should be available to every three teachers any time they wish it.

E. TV Receivers

Various serious attention should be given to the psychological, health and emotional problems involved in having too many students view a small screen (the use of the television receiver in the classroom is not merely for entertainment).
As a guide one could think about the number of people who ordinarily view a program at home on screens of the same size. Rather than invest in too many television receivers in the quantity which would be needed and desirable for a good learning situation in a regular classroom, serious consideration should be given to the purchase of devices which will project the television signal on a regular-sized classroom movie screen, or through a blackout box of great size. These are now available but require further development--demand from educators would speed up the process greatly!

## FOREIGN LANGUAGES

### To Elementary Committee:

"HUMANIZATION, not Mechanization!"

'They say:
'Talk is cheap' but
Listening is cheaper.
Thought is dear and
Follow-thru is almost impossible
to come by."

Not directed at
those present --
only a thought
to be shared.

---

Both of above items put on board before and referred to at beginning.

Also emphasized that "Elementary school people must stand up and be counted (lead) in this period when other people with little background in elementary school education begin to apply principles and techniques which are fundamental and old stuff for good elementary school teachers, to other levels--" [playing around with them in a somewhat naive and incomplete fashion and even trying to sell them as new items for elementary school.]

"This is the Age of the Discovery of Old Ideas." (To both Elementary and Secondary Committees)

"Just as one must look at the etymology of a modern word to thoroughly comprehend its meaning, one must look carefully at the original forms of so-called 'new ideas' in order to bring forth their greatest values." (To Secondary Committee)

*** [It is highly significant that there has not been an hour go by in this project where one could not hear other people say or say himself, "WHY, WE WERE ALREADY DOING THAT A LONG TIME AGO!" If any kind of negative morale factor will prevail in this project, it will stem directly from lack of due consideration given to this point.] ***

"There is a definite place for open-and closed-circuit TV in the foreign language program. As you know, if NDEA had not been messed up, we would have already had a closed-circuit TV experiment going this year using industry-proven, low-cost equipment that the Director had, in 1959, made arrangements to use available at that time from only one supplier in Hawaii. BUT there must be live contact between every single student and the teacher seen on the screen--on an equal basis. That is, every student will regularly have that live personal, direct relationship with his main language teacher. There must also be a constant two-way communication system in operation between the TV teacher and every single student who views and hears her. All this is readily possible. HOWEVER, IF WE SPEAK OF QUALITY EDUCATION, THEN A TV COURSE CAN NEVER TAKE THE PLACE OF CONTINUAL LIVE FACE-TO-FACE (HEART-TO-HEART!!) INSTRUCTION. If the objective of foreign language in schools is HUMAN UNDERSTANDING -- and that is its only justification: there is too much already in the curriculum without adding more for lesser reasons! --then we are OBLIGATED to provide HUMAN INSTRUCTION. /T.V. is merely a tool--only in automation are tools allowed to substitute for human beings. But in QUALITY EDUCATION we are dealing with hearts and souls, not nuts and bolts. We cannot confuse machine with MAN. From its very beginning it has always been a basic OPERATIONAL CONCEPT for the foreign language prog~~ram that~~ MAN MUST CONTROL THE MACHINE, NOT MACHINE THE MAN./

If the elementary school language program has had any degree of success it has been precisely for the reason that there has been a live teacher /not a flickering box./ To settle for less, is to lie when we speak of QUALITY EDUCATION. We must first have the live specialist in the school, then we will use tools as aids, not as QUANTITY substitutes."

---

"Our objective is not to load the schools up with specialists. On the contrary, the program aims at developing qualified resident faculty to handle the basic instruction. But our specialist will always be available for coordination, ensuring quality standards, and direct instruction only as required. That is why we have always called them TEACHER SPECIALISTS." (The Director then asked everyone to refer to the last sentence of section B, pg. 2, "Teacher-Specialists" which he read aloud for full emphasis.)

"Ideally, the elementary schools of the future in Hawaii will have two teacher-specialists available--one in a language of the EAST and one a language of the WEST. In this way we will be putting substance into our role as the State charged with a special responsibility."

---

The Director of Foreign Languages also emphasized the importance of OPEN-AND CLOSED-CIRCUIT RADIO! Gave examples and details. (Both Elementary and Secondary)

"Foreign lauguage in kindergarten, first and second grades is fine-- but let's think in terms of 'exposure'and 'readiness' not real instruction and 'learning.' It is true a child in these grades can say the same thing in two languages, but his maturity level (average) does not provide him with the more functional concepts that older children begin to have. Let's call it 'exposure' in kindergarten, 1 & 2 and 'regular language instruction' beginning 3rd or 4th grade."

---

At the beginning of his report to both elementary and secondary committees the Director of Foreign Languages emphasized strongly the TEAM ADMINISTRATION idea at the beginning of his written report. The elementary committee seemed to avoid any discussion of this important item. The secondary committee examined it in some detail. It is easy to claim that such an idea belongs more in secondary than elementary, categorically -- but this is doing the very thing the elementary people must not do if we are to explore possible changes for improvement. Certainly neither a small elementary nor a secondary school actually or nearly on a "teacher-principal" basis should view this idea as probable -- but if INSTRUCTION is the primary role of all schools, then this idea cannot be ignored. This project is exactly the place for careful consideration all professionally suggested ideas.

---

To Secondary Committee:

Many items mentioned above.

Discussed "Language and Area Study" as well as "Area Study" with language included. Also exploratory courses in language at intermediate level, e.g., "East-West Language Course," introduction to two languages in one year as basis for intelligent selection of specific language for subsequent intensive instruction.

Mentioned danger of fixed installations, if multi-purpose and flexibility in classroom is desirable. Immobility and rigidity of physical facility forces immobility and rigidity of classroom activity. This is not the kind of situation that encourages or facilitates creativity.

The Classroom Audio Center System in use throughout the state was originated precisely to allow for flexibility in the regular classroom. The system is the kind the head of the NDEA said he wished other states would use more. In its extended form, the CAC system includes facilities for individual 'listen and speak' activities within the regular classroom.

The Director of Foreign Language suggested audio-visual facilities for language and other subjects study by individual students be included in a central location -- ala or part of the library. Here fixed installations, booths, etc., will be very appropriate. Particularly will this be valuable for students in advanced courses where they already have the elementary foundation necessary to make full use of such facilities.

The use of traveling teachers in secondary for languages not yet in all day schedule was mentioned.

Suggested team teaching involving the language and area specialist as resource person for units, team taught in various subject areas, e.g., art, literature, music, speech, social studies. Carefully developed experiment already in progress at Waianae High School.

# PROGRAM FOR THE GIFTED

## A. General Introductory Statement

1. Innovation and change in education enjoys validity and success only insofar as it derives from basic considerations of the child's happiness, general welfare and individual accomplishment.

2. "New trends" in education need to be considered in light of the full implications of subtle concomitants of mass education techniques in terms of human complexity and inherent individual variability.

3. The most important single determinant in education for excellence is the quality and training of the teacher. All programming must be instituted to supplement and enhance the genius and devotion of the masterful teacher.

4. The most vital, significant and lasting facet of the academic learning process is the human relationship between pupil and teacher. Operational designs in education should seek to preserve and strengthen such relationships.

5. Any alterations in basic design and structure of education should involve preliminary study in real depth and must proceed from professionally conceived objectives based upon our social heritage, cultural values and human aspirations.

6. Extrinsic designs and the enroaching "technocracy of education" must be maintained in healthy perspective and relationship to established objectives and instrinsic functions of masterful teaching.

7. Major alterations in current operational procedures in the public schools should reflect the preferences and enjoy a continuing majority support of the parents, the citizenry, the pupils and professional personnel involved.

8. "Newer" trends and media now on the educational scene must be judiciously appraised and reappraised from all aspects to determine in each case whether claims purporting to further the uniqueness and creativity of the individual are true and valid. It is recognized by many that employment of mass media and impersonalized procedures in education presents a danger, both obvious and insidious, that genuine individualism, independent thinking and creative expression could be thus further submerged, in the ranks of both pupils and teachers.

9. Significant alterations in existing programs of education should not be implemented unless deemed sufficiently valid and desirable to receive financial support adequate enough to assure reasonable opportunity for success of the endeavor. Such alterations should

enjoy a period of favorable evaluation in thoroughly considered pilot programming before being extended to the entire field.

10. Acceptance of substantial financial assistance for public education from the coffers of private enterprise incurs the traditional risk of progressively devitalized initiative and effectiveness of local public effort, and of subtle controls, inevitably associated with money grants, which could eat away at the founding philosophy and concepts of public education in America.

11. In terms of a "creative look ahead" and "doing violence" to status quo operations in the DE, it is incumbent upon all EFL study participants to thoughtfully consider what highly promising improvements might eventuate if existing procedures and patterns were revitalized and augmented by completely renovated teacher training programs, reduced pupil-teacher ratios, teacher aides and preparation periods, improved facilities, curriculum differentiation and other long-overdue essentials. Let's not overlook the desirability and possibility of bringing some of this to pass even if it needs to be under the guise of "new trends" and a major "study" recommendation.

## B. In More Specific Reference to Education of the Exceptionally Endowed Pupil*

1. The several trends and media in education presently under study both locally and nationally have been selectively adapted to education of the exceptionally endowed in America's public schools for many years. Among others, these include nongraded advancement, dual progress plans, various versions of team teaching, use of newly available A-V media, small group seminars, value analysis groups, independent directed study and research, curriculum differentiation, schedule modification, and individual programming. The question, then, for these pupils of high level potential and ability, whose education must be in the vanguard of our best thinking and doing in order to prove truly effective, is one of how can the proven provisions be further refined and expanded?

2. As highly defensible and soundly proven modifications of curriculum, methodology, organization, implementation and administration take place within subject area programs and operational design, the atypical individual, in this instance the gifted, stands logically to benefit. The need for so-called "special programs" in education is directly correlated with the inadequacy of existing policy and design to properly accommodate exceptional youngsters in the mass education of youth. Excluding the genius, an ideal system of education could and should cultivate the unique potentialities of each individual within the basic framework of programming and provisions.

3. Curriculum

   a. Curriculum modifications and differentiation essential for exceptional children in most subject areas.

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*Also see attachments: Some Basic Objectives in Educating the Gifted; School Provisions for the Gifted, K-12; Cultivating Creativity in Our Schools.

b. Rigidity in the curriculum often handicaps teaching of the gifted.

c. All subject area guides and book lists should include apecial sections or supplements applicable to exceptional children.

d. Social Studies curriculum needs revamping to include greater emphasis on major contemporary issues and developments nationally and internationally. Primary curriculum particularly inadequate for the gifted.

e. Need for careful re-evaluation of sequential reading program for the gifted in terms of rate of progress in basal texts and supplementary reading opportunities.

f. Broader curriculum opportunities needed for the gifted at all levels. These might include, among others, current events, creative writing, foreign language, junior philosophy, creative art, music and dramatics, and leadership training.

4. Teaching methods and key learning activities

a. Allowance for and considered cultivation of creative non-conformity and divergent thinking in working with gifted.

b. Continuous and vital integration of learning in the several subject areas.

c. Less emphasis on mere accumulation of knowledge and more stress on learning how to think in order to be able to cope creatively with our rapidly changing environment and establish sound new patterns of leadership.

d. More extensive use of small group seminars and instruction as principal approach to education of the gifted.

e. Regular blocks of time for individual investigation and research, pursuit of special interests, and developing unique talents and abilities.

f. Exclusion from unnecessary review, drill, and group instruction in previously mastered concepts and skills.

g. Greater use of community resources--people, places, activities, facilities--to broaden the learning experience and deepen understanding.

5. School and classroom organization

a. Grouping of some sort increasingly imperative for full growth and development of exceptional individuals. Should be on a more professionally sound basis than chronological age--one of the least defensible methods.

b. Pupil-teacher ratio should be lowered for all levels of ability with priority going to the extremes of the normal curve of distribution.

c. Staff Utilization in programming for the gifted must allow time for planning, preparation, pupil, parent and teacher conferencing, and arranging for community resources.

d. Nongraded advancement promising for the gifted, if effectively implemented, as a means of accommodating individual differences in terms of the learning process and rate of advancement. Need not be limited to primary grades. Must be provision for continuity throughout the grades.

e. The several variations of team teaching presently in use by the Program for the Gifted have been favorably evaluated during the past two years and, with minor modifications, will continue in the schools.

Team teaching as presented during Program Delineation Study week entails a consideration of the following as realted to the gifted:

(1) Involves increased capital outlay. Additional money must be channeled into the procurement of finer teachers, reduction of class load, clerical help, etc., to make effective the realization of educational standards of excellence.

(2) Large group instruction will of necessity still be geared to the "average" students.

(3) The gifted (particularly) react unfavorably to being anonymous passive participants in large group activity.

(4) The gifted need masterful teachers in the small group work as much or more than in the large group. Team teaching hierarchy suggests teachers of lesser capability and distinction for most small group and individual experiences.

(5) Originality, creativity and independence of subordinate teachers could be stifled. Need for constant team interplay and relationships could prove distressing to highly creative and sensitive individualist (teacher) and result in inevitable trends toward group conformity and sameness in the teaching process.

(6) Greater specialization among teachers may encourage complacency and discourage continued intellectual growth on a broad front. The "whole child" needs a "whole teacher."

(7) Will not necessarily improve the basics of curriculum and methodology in teaching.

(8) Child's day, particularly at elementary level, could become over-structured in terms of programming--antithetical to natural child development, particularly the gifted person.

(9) Teaching competence in company with verbal facility, ambition, aggressiveness and administrative abilities more likely to be considered in relation to team leader position than simply masterful teaching.

(10) Could be effective for gifted in limited degree if conditions were optimum. (Elaboration on request.)

f. Educational TV

(1) Some potential value for the gifted on occasion, as with most all A-V facilities.

(2) Necessity of directing most presentations to ability and comprehension of the mass reduces value and desirability for gifted segment. Selective viewing essential.

(3) Stresses mass consumption as opposed to individual creative participation and expression (pupil and teacher).

(4) Present six-state simultaneous educational TV programming project opens door on "Brave New World" mass indoctrination and is questionable on numerous counts. (Elaboration on request.) Even local district and/or county viewing raises serious concerns relative to program selection and production to be beamed as mass education (indoctrination vs. intuitive learning).

(5) Is growing emphasis on Educational TV based on basic objectives in education of youth or more on an attempt to deal with critical issues facing the profession?

g. Teaching Machines

(1) Might enable gifted to learn some specific skills and provide for certain drill if needed--somewhat like a workbook, automated and refined.

(2) Automated teaching inimical to nature and capacities of gifted person. Should be minimized and carefully structured.

(3) Programming of machines, necessarily on widespread commercial basis for the most part, must ignore important factor of individual variability.

(4) Teaching machines remove student one more step from vital relationship time, motivation, challenge and stimulation of teacher and fellow students.

(5) Emphasis on facts as opposed to relationships, values, individual needs, attitudes, creative reason and judgment, etc., so important in all phases of educational experience for the gifted.

## Summary

No genuinely new trends in education, or earlier practices coming up for re-evaluation in light of contemporary times, should be passed over by educators without a thorough and discriminating consideration relative to the objectives and design of American education today. Nor should the profession be found guilty of "grabbing at straws" and desperation programming based on change for the sake of change or reaction to group pressures and vested interests.

That which has been found professionally desirable and effective in terms of the *overall* school experience *of the child*, as based on local pilot studies, and is acceptable to the community, should be intelligently employed in the field. Similarly, the converse should be true.

In the final analysis, we as educators must continually maintain as our *principal effort* the provision of masterful teachers for all children for every school experience.

* * * * *

> "I believe that teaching [and the education of youth] is an art and not a science...involving emotions which cannot be systematically appraised and employed, and human values which are quite outside the grasp of science. You throw your heart into it and realize that it cannot...be done by formulas or you will spoil your work, and your pupils, and yourself."
>
> Gilbert Highet

## SOME BASIC OBJECTIVES IN EDUCATING THE GIFTED

The worth and dignity of man is enhanced in proportion to the fruition and constructive application of his unique potentialities. Such optimum cultivation of human resource may be measured in terms of personal happiness and fulfillment, and the overall improvement of a society and culture.

Consistent with this aim, certain specific objectives may be set forth which apply in varying degree to the education of all youth. Certain of these which prove to be particularly significant in working with pupils of outstanding promise and ability are:

1. To emphasize and encourage creativity and experimentation.
2. To further self-understanding, inner consistency and the ability to deal competently with self and others.
3. To foster a true love of learning and the emergence of high aspirations.
4. To broaden the base of knowledge, deepen understanding, and increase the level of skills.
5. To stimulate initiative, originality, reflective thinking, and investigation.
6. To establish and maintain high standards of performance and accomplishment.
7. To afford opportunities for independent pursuits, firsthand experiences, leadership training and social adjustment.
8. To develop the powers of logical reasoning and sound judgment, including the ability to evaluate oneself.
9. To advance specific interests and aptitudes in order to sustain specialized competencies at higher levels.
10. To cultivate a greater understanding and appreciation of our cultural heritage and the "good life."
11. To motivate the desire to meet the special expectations society has for individuals with unique talents.
12. To encourage a wise and sensible balance in the cultivation and development of body, mind and spirit.

# SCHOOL PROVISIONS FOR THE GIFTED, K-12

Perhaps the least controversial commentary on American education in our present era is that most philosophy and action within the profession seems to stimulate healthy controversy! One subject, however, which enjoys a remarkable degree of consensus among educators is the concept of individual differences and the importance of properly providing for the potential and ability of each and every pupil.

But here much of the harmony and agreement ends. Just how these individual differences can and should be accommodated is a matter which has inspired considerable professional and non-professional expression and widespread experimentation in the field. Many of these commendable attempts within the schools of our Nation to sincerely provide a more individualized approach to the education of youth have stood the test of time as practical effective measures. Out of this growing body of knowledge a number of sound and helpful ideas have emerged which are of marked significance for exceptionally endowed youngsters; endowed in terms of intellectual ability, unusual creativity and special talent.

The accompanying chart represents a compilation of those provisions for such individual differences which have proven most feasible and purposeful for administrator, teacher and child in terms of existing educational design and facilities. The indication of grade levels at which the various provisions might best be implemented is in no way meant to be conclusive. It is intended to serve simply as a guide to be flexibly interpreted consistent with the many factors which each principal and his faculty must consider in relation to their own school.

|  | TYPE OF PROVISION GRADE→ | K | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | Identification | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 2. | Early Admission to K or Grade 1 | X | X |  |  |  |  |  |  |  |  |  |  |  |
| 3. | Individual and Small Group Counseling | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 4. | Enrichment in the Regular Classroom | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 5. | Ungraded Individual Progress Plan | X | X | X | X | X | X | X |  |  |  |  |  |  |
| 6. | Partial Acceleration of Pupil (By Subject) | X | X | X |  |  |  |  | X | X | X | X | X | X |
| 7. | Full Acceleration of Pupil |  |  | X | X | X | X | X | X |  |  |  |  |  |
| 8. | Grouping by Grade-level Sections or Within the Class | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 9. | Appropriate Teacher Assignment | X | X | X | X | X | X | X | X | X | X | X | X | X |
| 10. | Part-time Special Enrichment Classes |  |  |  |  | X | X | X |  |  |  |  |  |  |
| 11. | Subject-matter (Course) Acceleration |  |  |  |  |  |  |  | X | X | X | X | X | X |
| 12. | Rapid Progress (Multi-track) Plan |  |  |  |  |  |  |  | X | X | X | X | X | X |
| 13. | Special Talent and Interest Groups |  |  |  |  | X | X | X | X | X |  |  |  |  |
| 14. | Honors Classes |  |  |  |  |  |  |  |  |  | X | X | X | X |
| 15. | Seminars for the Gifted |  |  |  |  |  |  |  | X | X | X | X | X | X |
| 16. | Differentiated Curriculum |  |  |  |  |  |  |  | X | X | X | X | X | X |
| 17. | Individualized and/or Independent Study Program |  |  |  |  |  |  |  |  | X | X | X | X | X |
| 18. | Extra-Curricular Activities |  |  |  |  |  |  |  |  | X | X | X | X | X |
| 19. | Summer School Enrichment Classes |  |  |  |  |  |  |  |  |  | X | X | X | X |
| 20. | Special Electives |  |  |  |  |  |  |  |  |  |  |  | X | X |
| 21. | Advanced Standing in College |  |  |  |  |  |  |  |  |  |  |  | X | X |
| 22. | Credit by Examination |  |  |  |  |  |  |  |  |  |  |  | X | X |
| 23. | Early Admission to College |  |  |  |  |  |  |  |  |  |  |  |  | X |

PROGRAM FOR THE GIFTED

# CULTIVATING CREATIVITY IN OUR SCHOOLS

> "The right to inquire is at the very
> heart of the spirit from which all
> creativeness develops."

The attribute of creativity has too long been shrouded by an aura of the "unknown." Only in relatively recent years has man begun to consider and investigate on a major scale this quality and power which is generally felt to exist as a potential within every individual.

With the marked upsurge of interest in the creative process as it relates to the education of youth, the usual danger exists that indiscriminate exploitation of the word creativity itself and related concepts can reduce both to little more than pedagogical jargon. On the other hand, where studious and sincere application of the expanding body of knowledge about creativity takes place in our schools, the individual stands to attain a higher order of personal fulfillment and the progress of mankind in all areas of human endeavor assumes a new direction and vitality.

Creativity has been variously described and defined. An artist has called the creative act "...the free exercise of high skill resulting in something novel." An educator has defined creativity as "...the process of forming ideas or hypotheses, testing hypotheses, and communicating the results." From others in diverse fields of study we have : "Creativity is a way of life"; "Creativity is a maximum of self-actualizing"; "Creativity is the encounter of the intensively conscious human being with his world"; "Creativity is the disposition to make and recognize valuable innovations"; and, lastly, "Creativeness means to be born before one dies!"

In numerous studies certain characteristics of the creative person consistently stand out. The following items suggest some of the principal components of creativity:

1. Sensitive perception of details in the world of nature and the world of man.

2. Openness, awareness, an attitude of inquiry, concern about unsolved problems.

3. Focus, concentration and personal discipline--the ability to enter deeply into an experience.

4. Ability and courage to depart from the mold of conformity into untraveled areas of constructive thought and action.

5. Ability to analyze, to abstract and to synthesize.

6. Originality, flexibility and spontaneity purposefully directed.

7. Fluency of thought.

8. Ability to find some unity in apparent diversity, to perceive structure and relationships, to create new designs.

9. Capacity for evaluating the quality and logic of ideas.

10. High degree of satisfaction in activities which present stimulating challenge and offer promise of fresh exploration, discovery and solution.

As the educator applies his understanding of these and other characteristics toward more certain recognition of unusual creativeness in children and youth, he then faces the magnificent opportunity to help cultivate, through his personal and professional efforts, this potential for a richer more significant way of life.

On the pages which follow, twenty ideas relating to the development of creativity through school experiences have been set down. It is hoped that the suggestions in this compilation from many sources* may prove both helpful and effective for all who undertake to imbue the word "creativity" with genuine meaning in the schools of Hawaii.

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*Special recognition and thanks is accorded to E. Paul Torrance, Director, Bureau of Educational Research, University of Minnesota.

# CULTIVATING CREATIVITY IN OUR SCHOOLS

## 1. Value Creative Thinking

If we expect to develop creativity, we must learn to value it. Educators should consider the development of creative talents to be at least as important as the teaching of information.

## 2. Make Children More Sensitive to Environmental Stimuli

Almost all of the recent studies of highly creative individuals in a variety of fields emphasize the importance of being sensitive, of being open, to some kind of environmental stimuli. We know that young children can be helped to sense such stimuli more clearly and vividly and that this affects the quality of their creative productions.

## 3. Encourage Manipulation of Objects and Ideas

The young child has an almost irresistible tendency of manipulation and exploration of objects and this seems to be the basis of curiosity and much inventiveness. Studies of creative thinking in the early school years show a significant relationship between degree of manipulation and the quality and quantity of inventive responses.

## 4. Teach How to Test Ideas Systematically

One of the most widely accepted objectives of education is to teach the young to test reality, to give them a realistic picture of the world in which they live. Yet we observe at all levels of education and in many areas of adult life the rejection of brilliant and imaginative ideas with no testing. Teachers should show pupils, beginning in the early grades, how to define a problem and keep testing each suggestion systematically.

## 5. Develop Tolerance of New Ideas

An important defect of much of our educational system today is that more emphasis is placed on the establishment of behavioral norms than on the production of original work. Teachers may even be annoyed when a pupil presents an original answer which differs from what is expected, because it does not fit in with the rest of their scoring schemes for grades. They have to stop and think themselves how the unusual answer should be treated; in many cases, they cannot decide and this is disturbing. If habits of submitting these ideas to reality tests have been established, there is a basis for tolerance. In fact, an important role of the teacher or the leader is to protect and obtain a hearing for minority ideas and solutions to problems.

Along with tolerance of new ideas we should include tolerance of the creative personality. When one thinks in ways which are customarily tabooed, his peers may look upon him as mentally unbalanced. Many students of the creative process regard this kind of imbalance as healthy rather than unhealthy. The truly creative personality is ready to abandon set concepts and sees in life many rich and new possibilities. He sees as shortsighted the claim of society that all its members should adapt themselves to a norm for a given time and place.

### 6. Beware of Forcing Set Practices and Patterns

It is quite likely that just as there is a scientific method there is a creative method. There are many ways to describe a flower, plan a house, write a paragraph, or test a scientific hypothesis. Freedom and permissiveness, with guidance reduced to a basic minimum, are important prerequisites to much creative work.

### 7. Develop a Creative Classroom Atmosphere

Children should learn early that creative ideas are shared and enjoyed by the group. Education would do well to maintain an important role for the highly creative, but frequently silent, individual. If the child is given an increased number of materials and opportunities in various media, he will develop a greater enjoyment of creative imagination experiences.

### 8. Teach the Child to Value His Creative Thinking

It is important that the child learn early to place value on his own ideas and to trust his perceptions of reality. One approach to this is to have the child form the habit of recording what he thinks. This helps him to appreciate the value of his imagination and at the same time discourages excessive daydreaming. As the child sees his own ideas expressed in some concrete form, he should be encouraged to elaborate his efforts.

In connection with this principle a word should be said about the matter of fantasy. Many parents and teachers have looked upon fantasies as something unhealthy to be eliminated. Fantasies such as imaginative role playing, telling fantastic stories, making unusual drawings, and the like should be considered as normal aspects of a child's thinking and doing. Certainly we are interested in developing meaningful creativity, but it seems essential that youthful fantasy must be kept alive until the child's intellectual development is such that he can engage in a sound and productive type of creative thinking. There has been scattered evidence in testing of children in the first and second grades that many of those with impoverished imaginations have been subjected to concerted efforts to eliminate fantasy from their thinking too early.

### 9. Teach Skills for Compromising Peer Sanctions

The importance of valuing the highly creative individual so he will not have to exist as an unhappy deviate in the shadow of perhaps more athletic or socially adept peers has already been stressed.

An examination of almost any of the many lists of personality characteristics of highly creative individuals suggests that it may be almost inevitable that such individuals will alienate their peers. It seems obvious that the problem resolves itself into one of helping an individual maintain those characteristics which seems essential to the development of his creative talent while at the same time helping him to acquire skills for avoiding or reducing to a tolerable level the peer sanctions, so he will have an opportunity to find happy expression for his creative talent.

Help the highly creative child to maintain his assertiveness without being hostile and aggressive. He must be aware of his superiors, peers, and subordinates as persons. He may work alone but he must not be isolated, withdrawn or uncommunicative. In the classroom he must be congenial but not necessarily sociable; outside the classroom he should be sociable but not intimate. He must "know his place" without being timid, submissive, or acquiescent and must "speak his mind" without being domineering. As he tries to gain a point, he can be subtle but not cunning or manipulative. In all relationships, he must be sincere, honest, purposeful and diplomatic but not unwilling to accept "shortcuts" or travel unconventional paths. In the intellectual area, he must learn to be broad without spreading himself too thin, deep without being "bookish" or "too scientific," and "sharp" without being overcritical. This obviously asks much of the child but it provides a model which the highly creative youngster apparently needs to emulate.

## 10. Supply Information About the Creative Process

Historically, the creative process has been left pretty much to chance. Psychologists surveying the educational scene at all levels have become increasingly convinced that the processes of acquisition, impression, intake, and learning skills have tended to dominate over those concerned with production, expression, output, and creation. It would seem that educational psychology can do much to reduce the fears of teachers and pupils that their creative abilities are absent or negligible by acquainting them with an understanding of the creative process and the conditions under which creativity flourishes.

The steps in the creative process seem to be quite well established and the process appears to be essentially the same regardless of the activity. First, there is apparently the sensing of a need or deficiency, random exploration, and a clarification or "pinning down" of the problem. Then ensues a period of preparation accompanied by reading, discussing, exploring, formulating many possible solutions, and critically analyzing these solutions for advantages and disadvantages. Out of all this activity comes the birth of a new idea--flash of insight, illumination. Finally there is experimentation to evaluate the most promising solution and the selection and perfection of the idea.

It is not necessary to let the production of creative ideas continue to be solely a matter of mysterious chance as it has tended to be in the past.

## 11. Dispel the Sense of Awe of "Masterpieces"

In our attempt to develop an appreciation of the great masterpieces of man's creation, educators have frequently been guilty of producing a sense of awe of the perfection of these masterpieces. There is some reason to believe that this sense of awe constitutes a barrier to the development of creative talent. Much of this awe can be dispelled if teachers take the time to show in detail the methods which the artist or author used. If a child is shown how a masterpiece is developed step by step, he will stop thinking of it as something beyond his reach and will gain confidence that he too can do some original work. Most theories of physical phenomena can also be shown to have evolved by means of successive approximations.

In this connection, the following are some reminders that teachers can keep before children:

a. All have creative abilities, but not all in the same areas.

b. Even though someone may have done it before, it still might be creative to you.

c. When we are blocked in the solution of a problem, maybe we need to learn new techniques.

d. The solutinn of our problem doesn't always come after prolonged study of the subject. It may come like a flash after a rest or it may come while one is engaged in a completely different occupation.

e. Above all, don't be afraid to express all the thoughts that come to you, no matter how unusual they may seem.

### 12. Encourage and Evaluate Self-Initiated Learning

Apparently the first signs of creative thinking in children occur in the spontaneous accompaniment of other activities. One mark of the highly creative individuals is his exceptional self-starting ability. The strong curiosity of the child and his exploratory tendencies suggest that all or almost all children have this self-starting ability. The problem of parents and teachers is to keep it alive. It seems quite likely that this self-starting ability is hindered by overly detailed supervision by parents and teachers. It is possible that too much reliance is placed upon prescribed curricula and that we need to make more effort to appraise and credit growth resulting from the student's own initiative. Since we live in an era of change and we can expect ever increasing rates of change, it would seem that more emphasis might be placed on the task of learning how to learn, the development of self-motivation, keener judgments, critical thinking and reasoning, and the capacity for coping with change. Perhaps we would develop a higher level of creative thinking if we did not try to teach such a large number of subjects and allowed time for self-initiated learning, thinking creatively about the subjects taught.

The reason for evaluating and crediting self-initiated learning seems quite simple. Because grades are important to students, they tend to learn whatever is necessary to obtain the grades they desire. If we base our evaluation on the memorization of details, students will memorize the texts and lectures. If grades are based upon ability to integrate and apply principles, they will attempt to do this. If credit is given for the development of original ideas and for self-initiated learning, they will develop original ideas and engage in self-initiated learning.

### 13. Create "Thorns in the Flesh"

There is rather general recognition in studies of creative thinking that the essence of creativity lies in a sensitivity to defects, the recognition of a disturbing element. One writer maintains that no one is a creative thinker unless he continuously has a thorn in his flesh. He further feels that thick-skinned people do little or no creative thinking; to them everything is understood, nothing is baffling, there are no problems. Having become sensitive to a disturbance, the creative thinker stays with it, analyzes it, and finally comes up with some kind of speculative answer which is then confirmed by empirical, and preferably experimental evidence. The teacher may have to create these thorns in the flesh by asking controversial or unanswerable questions and posing problems calling for unique discovery and solution.

### 14. Create Necessities for Creative Thinking

It has often been said that "necessity is the mother of invention," and certainly demanding emergencies and extreme conditions have stimulated much inventiveness. In one sense, this old saying is true because necessity is the need which initiates the creative or inventive process. The individual, of course, must react with the proper motivational intensity to the need. Teachers have many opportunities to create situations which require children to do creative thinking. Every individual should occasionally confront problems which stretch his imagination and ingenuity to the limits.

### 15. Provide for Active and Quiet Periods

The provision of both active and quiet periods appears to be significant in encouraging the production of new ideas. Important ideas occur to some people suddenly in the heat of various kinds of activities. The history of invention and discovery, however, shows that quiet periods of reflection are also conducive to creative thinking. Repeatedly the bath tub, the bed, the church, and the like have been named as the birthplace of great ideas. The child is not likely to be able to give way to his fantasy, wishes and dreams, and produce imaginative ideas in a busy classroom of 30 to 35 active classmates. The teacher can, however, help the group plan periods of quiet and relaxation during the day. Children should have a chance to do some things alone and not have to participate in group activity every minute of the day. Let them read, write, draw, assimilate, rest, reflect, and investigate as individuals; the quiet may be an aid to creative thinking.

As already mentioned, group stimulation can be valuable. Such school activities as dramatic play, music, and the like can also be important in stimulating creativity. In scientific discovery, rational teamwork and an interchange of ideas are useful in exploiting some results and in the improvement of new techniques. It seems clear, however, that fundamental discoveries arise principally from the efforts of a single individual who is able to follow any fruitful paths suggested by his intuition.

### 16. Make Available Resources for Working Out Ideas

It is obviously important that children have available the resources for working out some of their ideas. Otherwise, frustration and a feeling of purposelessness are likely to result. There is value in the excitement which comes from seeing the embodiment of one's idea in some concrete form or product. It is also important that teachers and parents utilize the resources of the community in stimulating creative thinking and in working out ideas. The public library, museums, farms, factories, recreational facilities, service institutions, and the like can all play important roles.

Few schools and even communities will be able to provide all of the resources which children will need and want for carrying out their ideas. It is therefore important that they be taught to accept creatively the unavailability of resources and to learn to improvise. It might be pointed out that there is an important difference between accepting limitations cynically and accepting them creatively.

### 17. Encourage the Habit of Working Out the Full Implication of Ideas

Often original thinkers fall far short of their potential achievement because they fail to follow through on their ideas and work out their full implications. As a result, their work may have obvious defects which could have been eliminated easily. Or, such individuals may fail to reach an important discovery just because they did not press their thinking far enough or carry an idea out to its logical conclusion. A child should begin learning early a willingness and desire to follow through on ideas and to do some of the tedious work of implementing ideas. Later, he must learn to submit his ideas to the standard tests of science, art, literature, and the like.

In many respects the organization of our curricula and the pressure to "cover" standard bodies of content serve as an obstacle to working out the implications of ideas. It is encouraging that today's elementary school seems to be developing more flexible daily schedules.

### 18. Develop Constructive Criticism--Not Just Criticism

A study of psychology of inventors (Rossman, 1931) indicates that an important difference between the inventor and the non-inventor is that the latter tends only to complain about the defects in his environment while the former is likely to say "this is the way to improve things." These two kinds of thinking are quite apparent in the responses of children even in the first grade.

Every subject we teach offers opportunities for developing and reinforcing the habits and skills of analysis and constructive criticism. Those who characteristically tend to be critical find it difficult to approach a problem imaginatively and those who characteristically tend to be imaginative find it equally difficult to confine themselves to pointing out defects.

### 19. Encourage Acquisition of Knowledge in a Variety of Fields

Although we have outstanding examples of achievement by "one-track" minds, the history of discovery and invention shows that many of our great creative thinkers have been scholars and that originality is not contaminated by knowledge. Knowledge outside and beyond one's special field is useful in promoting original ideas. In fact, it seems that much of our progress on the frontiers of knowledge has resulted from a specialist in one field borrowing an idea or a technique from another special field and applying it to his own. This diversity of interest and the right to explore new and possibly unpopular ideas lies at the base of problems of academic freedom.

### 20. Become an Adventurous-Spirited Teacher

The highly creative child will likely continue to feel estranged and inhibited in the school unless he has adventurous-spirited teachers who are willing to listen to some of his wild ideas, help him to test and develop these ideas, and enjoy with him the cultivation of his creative faculties. The adventurous-spirited teacher will impart such spirit to his pupils and even the least imaginative child will probably become more creative. It is reasonable to expect that the teacher who is eager to explore the mysteries of the world about him will fill his pupils with the same desire to discover the new and explore the unknown. If the teacher is forever trying to find out the cause of things, pupils will be stimulated to do likewise.

## SUMMARY

First, it is assumed that the development of creative thinking is important from the standpoint of mental health, the acquisition of knowledge, the application of knowledge for successful living and professional performance, and the progress of civilization. It is also assumed that all individuals to some degree possess the abilities involved in being creative, that these abilities can be improved through education, and that it is the school's legitimate function to provide such training.

## Philosophy and Objectives of Guidance in the Secondary Schools of Hawaii

The Department of Education has set forth an educational policy for the public school system of Hawaii which defines the basic functions and aims. Within this policy framework the recently prepared DE guidance "handbook," Secondary School Guidance in Hawaii, further defines guidance, discusses its philosophy, and outlines its aims. In this publication it clearly can be seen that guidance is an integral part of the total educational program. The following abstract from the first chapter of this publication most clearly gives an overview of Hawaii's secondary school guidance program. The committee believes that the philosophy, objectives, criteria, and content for the program will not change much in the years to come. However, the staffing, pupil scheduling, design of facilities and equipment for carrying them out may be modified as indicated in the sections to follow.

### - ABSTRACT -

### AN OVERVIEW OF THE SECONDARY SCHOOL GUIDANCE PROGRAM

### A Definition of Guidance and Its Aims

As the total educational program has been expanded to serve the ever increasing range and variety of student needs, the demand for guidance has also increased. To facilitate the educational process, specialized programs for assistance to students, teachers, and parents have been developed. Guidance at the secondary school level is that systematic professional aid provided to each student to help him make satisfactory adjustment and achieve the best possible development toward self-realization and self-direction.

The specific aims of guidance may be described as giving aid to students in the following areas:

| | | |
|---|---|---|
| I. | Appraisal: | Understanding of self and of personal characteristics in relation to social demands and opportunities. |
| II. | Adjustment: | Understanding, acceptance, and conformance to essential academic and social requirements. |
| III. | Orientation: | Formulation of suitable educational-vocational plans, development of favorable personal-social attitudes and values. |
| IV. | Development: | Fulfillment of normal developmental tasks, achieving ability potentials; attaining satisfactory social development; developing self-definition and a personal identity. |

These aims are based upon and are consistent with the statement of the "Educational Policy of the Public School System of Hawaii, 1952," which emphasized the worth and importance of each child, youth, and adult and his relationship to a changing society.

## Basic Criteria for a Total Guidance Program

1. The guidance program should conduct and coordinate its activities on all grade levels from kindergarten through post high school.
2. Certain guidance responsibilities should be accepted by each teacher as an inherent and appropriate part of his total responsibility.
3. The guidance program should be a continuous, unitary process which give appropriate and adequate emphasis to all phases of individual development.
4. The guidance program should place definite, continuing emphasis upon the specialized assistance given students in the determination of educational, vocational, personal-social goals, and in the development of special interests, abilities, attitudes, and ideals.
5. In addition to counseling pupils on common needs and problems, the guidance program should include specialized provisions for exceptional students.
6. The guidance program should be planned in consultation with staff members and should be based upon the individual and group needs of students.
7. The guidance program should organize, interpret, and make accessible the information obtained about each student.
8. The guidance program should be coordinated with an adequate testing program.
9. The guidance program, although not directly responsible for discipline, should be effective in alleviating disciplinary problems.
10. The guidance program should work continuously toward improvement of its activities in the light of its program evaluations and should suggest possibilities for the advancement of the total school program.

## The Secondary School Guidance Program[1]

The guidance program in the secondary school differs from that in the elementary school because both the institution and the student face different problems. The elementary school child is essentially dependent upon one person; his school life centers about his relationship with one teacher at a time. At the secondary level, the two important differences are that the child has become an adolescent and the school is so organized that he is related no longer primarily to one teacher but to several different people in the course of each day. Quite suddenly he faces the task of establishing more and new kinds of relationships. A greater degree of independence and the necessity for making choices are thrust upon him. To help him meet these new demands, different aspects of guidance need to be made available.

The growth needs of young people during this period of development can be referred to as the "developmental tasks" of adolescence. A summarized list of these follows:[2]

1. The need to grow in responsibility and independence--to change from the dependent child into the self-reliant, resourceful, confident adult.
2. The need to orient himself toward the future--to develop appropriate educational and vocational plans.
3. The need to establish wholesome relationships with the opposite sex.

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[1] This section is a statement by Dr. Henry McDaniel in "The Program of Special Educational Services," pps. 5-6, a part of the Odell Survey of Hawaii Schools 19

[2] Adapted from Havighurst, Robert J., Developmental Tasks and Education, New York, Longmans-Green, 1948.

4. The need to prepare for effective work and citizenship, to achieve an inner harmony between ideals and behavior, to understand and respect necessary authority, and to develop an individual conscience.
5. The need to prepare for family responsibility--to develop the capacity to give and receive love and to subordinate his own desires to those of others.
6. The need to develop a constructive philosophy of life--to accept himself, to acquire the tolerance and insight to accept others, to acquire a sense of proportion that enables him to accept criticism with good humor and good sense, and to be satisfied with moderation.

## MAJOR CONTENT MODIFICATIONS

The program activities and content of guidance have been outlined and defined in the secondary guidance "handbook." The content and activities remain essentially the same. However, with more adequate guidance staffing the guidance program becomes focussed on the counselor as the key person. The content modifications are essentially in terms of amount of time and emphases and focussed upon the counselor instead of the classroom teacher (HR, Social Studies, etc.), who will be carrying on these activities, both in instruction in guidance and in special group work. The guidance experiences and content cover the following areas and will vary according to special needs, grade, interests, aptitudes, and developmental levels of students:

1. Orientation activities
2. Appraisal--studying and understanding self
3. Vocational orientation
4. Educational and vocational planning
5. Personal planning and adjustment
6. Development of positive habits, attitudes, and values.

At the secondary level there are certain "critical points" in the "Developmental Line" as a person matures at which special guidance assistance is needed. These are decision-making points which follow:

Grade 8: Tentative planning for four-year high school program of study.
Grade 9: Evaluation of intermediate school record and beginning of intensive self-appraisal and understanding.
Grade 12: Completion of post-high school plans with assistance towards making a satisfactory beginning towards chosen goal.

The learning experiences and broad educational program leading up to these decision points are a team process by the student, teachers, counselors, and others. However, it is at these decision points that the counselor gives special help to the individual to appraise, evaluate, and interpret the self-situations through counseling and special group work. Counseling and special group work at these critical points do not preclude a continuous program of guidance which lays the foundation for special assistance at these special points.

## GUIDANCE STAFFING

The patterns for organizing a school for guidance is clearly described in Chapter III of Secondary School Guidance in Hawaii. It is emphasized that the general guidance objectives described earlier still give direction to the program and organization for guidance in a school.

The staff described below will be fully trained professionally certified people with desirable personal qualities, and adequate experiental backgrounds.

In the overall staffing within the school for guidance, besides the usual clerical, teaching, and administrative staff, the following are required:
7 counselors (includes one who serves half time as head counselor).
Ratio: 1 - 300
1 school psychologist. Ratio: 1 - 2,500
1 school social worker. Ratio: 1 - 2,500
3 clerks (two clerks to serve counselors and one clerk to serve school social worker and psychologist.)

Presumably, since this will be a pilot school, there may be additional staffing beyond the regular staffing. These staff members will be people in training for positions as counselors, school social workers, and school psychologists. These people may be from the University's training program or from the DE itself--promising people who may be assigned temporarily to the pilot school to observe and for training. The numbers will be flexible.

In addition, the school will be served by out-of-school specialists such as public health nurse, doctor consultant, district and state guidance, curriculum, etc., specialists, community agencies workers, other community resource people, etc.

## PUPIL SCHEDULING

Guidance comes of age and has a real opportunity to develop its potential in this school of tomorrow. Team teaching in the form of large group instruction, small group instruction, and individual conferences has been tools in the hands of guidance program for many years. However, limitations in terms of lack of space and equipment and personnel have prohibited the development of practices to their fullest.

Briefly, the counselor's work consist of the following:

*1. Individual counseling and interviewing.
    a. Appraisal, analysis, and evaluation of every pupil's needs, problems, and situation.
    b. Counseling students for orientation, adjustment, and development.
*2. Group guidance information and instruction, and special group work with students for appraisal, adjustment, orientation, and development in particular areas where there has been an expressed need.
*3. Consultation with teachers--to understand pupils better and to

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*Core of the counselors' responsibility.

use and to develop guidance techniques.
4. Working with teachers in pre-diagnostic case studies.
5. Referrals
6. Liaison with home and community.
7. Development, supervision, and coordination of all phases of the guidance program.
8. Evaluation of the guidance program and research.

Having defined the role of the counselor, the following pupil scheduling pattern is suggested. In the rescheduling of subject content area, presumably some subjects can be taught in fewer periods than now required. This would release some periods which could be assigned to group guidance, information and instruction and special group work. These group sessions could be of various sizes and levels:

1. Large groups for guidance information which may involve the entire school or grade levels in several assemblies during the year.
2. Large groups of about three hundred students meeting with a counselor in similar areas according to grade level. Guidance instruction areas may include, for example, orientation, vocational exploration, educational information, group test interpretation, etc.
3. Small groups no more than 35 students meeting with a counselor. This would be a follow up discussion of (2) above based on developmental level, interests, and special needs.
4. Small groups of no more than a dozen students meeting with a counselor in special group work sessions for informational, attitudinal, as well as developmental purposes.

The guidance experiences and content areas as spelled out in the secondary guidance "handbook" could be carried out by the professional counselor in these group sessions. The classroom teacher will still have an active role in guidance and described under "Teacher Programming." In addition, each teacher having training and competencies in specialized areas can further supplement the counselor's work by providing the information and knowledge he possesses to individual students who may indicate an interest or preference for certain activities, as well as in areas of academic adjustment. However, it will be a major responsibility of the counselor to carry on group instruction in guidance and in special group work with large and small groups of students in the various guidance areas. This group work will be supplemented by professional individual counseling of a high order given to each student of the group by the assigned counselor.

In order to provide for the pupil scheduling pattern suggested above, it would be necessary to provide regularly scheduled time (at least one period a week) for students to meet with counselors for group instruction in guidance and for special group work. The period allotted per pupil should be scheduled as follows:

Large groups of about 300 -- one period every month.
Small groups of no more than 35 -- one to two periods per month.
Small groups of no more than 12 -- two periods a month.

In terms of the allocation of the counselor's time it would mean:

Individual counseling (all needs) -- 50% of time
Group instruction in guidance and special group work -- 20% of time
Consultation with teachers -- 20% of time
Other duties -- 10% of time

Of course, the above division of time should be flexible to permit variations to fit the situation.

## TEACHER PROGRAMMING

Guidance and education for individual appraisal, adjustment, orientation, and development involve the day-by-day influence of the teacher. The acquisition of information, understanding, and skill, the formation of attitudes and habits, the development and strengthening of the self concept and the ability to plan, decide, and evaluate all occur in regular school activity. Guidance and education process also involves the counselor who gives more specialized, intensive, and individualized attention through more complex techniques to the problems of individual students at strategic points, working with pupils, parents, and teachers. Other specialists are involved for students who need further specialized help.

The teacher, then, serves both as a guidance worker and as an instructor. As such an individual he would have the following guidance functions:[1]

1. Creation of favorable psychological conditions and setting.
2. Systematic developmental and adjustive guidance work in social attitudes and dispositions; self-concept; self-direction.
3. Identification of individual needs and problems.
4. Observation, appraisal, recording of individual characteristics and data.
5. Adaptations of individual and group experiences to individual needs.
6. Limited interviewing and counseling for academic and personal-social adjustment, and orientation.
7. Consultation with parents.
8. Referral of pupils to specialists through the counselors when necessary.
9. Participation in conferences involving needs and problems of individuals.

Thus, in the pilot school which will use team teaching and other newer methods of instruction, the teacher will be taking a more active role in the guidance of individual students. The need to continually trying to know the students better in order to maximize each student's learning, self-understanding, and social adjustment will require of each teacher:

1. Time to observe students singly or in group situations.
2. Time to study records on the individual student for better acceptance, understanding, and teaching.
3. Time to appraise and record individual characteristics and data.
4. Time for conferences with student or small groups of students.
5. Time for participation in conferences involving school and out-of-school staff.
6. Time for consultation with parents.

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[1] From mimeographed material prepared by Dr. Robert H. Matthewson, New York City Board of Higher Education, Division of Teacher Education.

## NEW DESIGN OF FACILITIES

In order for the foregoing objectives and services to function effectively it is essential that adequate physical facilities be provided. The following abstract from a recent U. S. Office of Education publication[2] simply and concisely relates the guidance function to guidance facilities:

"The concept of guidance in current philosophy and practice, includes guidance as a point of view, as a developmental process, and as an organized set of services which are coordinated and identifiable toward definite educational objectives under professional leadership. Activities are centered on the needs and problems of the individual student and are continuous in nature.

"Organized guidance services and activities require adequate physical facilities. Among these services are the following.

### Counseling Service

"The function of the counseling service is to provide professional assistance on an individual basis to all students in assessing their potential and needs, in helping them make appropriate occupational and educational choices and plans, and in helping them develop an increasing maturity of judgment in dealing with problems of a personal nature.

### Informational Service

"The function of the Informational Service is to make available to students and teachers information covering educational and occupational opportunities and requirements as well as information dealing with personal and social adjustment.

### Appraisal Service

"The function of the appraisal service is to make available to students, counselors, teachers, and related school personnel, pertinent information concerning individual students to the end that the individual may achieve better self-understanding. This information includes such cumulative data as home and family environment, leisure time activities, cocurricular activities, educational and vocational plans, and results obtained from standardized tests and measurements.

### Consulting Services

"The function of the consulting service is to provide a mutual communication of information among professional persons who are directly related to, and charges with, responsibility in the development of the individual student.

### Research Service

"The function of the research service is to provide significant findings pertaining to developmental aspects of the guidance program, and to evaluate the total guidance process."

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[2] Don D. Twilford, editor, Physical Facilities for School Guidance Services, Washington, 25, D.C.: Office of Education, U. S. Department of Health, Education, and Welfare, undated, 22 pp.

This bulletin points out that preconceived, detailed plans are like to stereotype the design of guidance facilities. Facilities should be planned individually for each school. It suggests the initial use of "diagrammatic schemes" to show relationships of areas with services. These diagrammatic schemes should be developed for a specific school from which the architect can design the facilities incorporating the relationships as shown. The following two diagrammatic schemes have been abstracted with modifications for specific secondary school proposed.

(See attached diagrammatic schemes)

Guidelines for the location of Guidance Unit[1]

1. Located out of but near the main flow of student traffic, so noise is limited and privacy is obtainable, to facilitate contact, scheduling, and communication. Lavatory and drinking facilities readily accessible.

2. In proximity to, yet separate from but near the administrative offices for convenient access to personnel record and certain clerical services (including attendance).
3. Accessible by a direct entrance from corridor.
4. Located to provide exits from counseling area. Separate from entrances, if possible.
5. Readily accessible from a main entrance for the benefit of parents and representatives of community agencies.
6. Reasonably near to related personnel services, such as pupil accounting, health, and psychological services.
7. Reasonably near to the library for convenience in use of display and reference materials, and to audio visual center.

Space

The Guidance Unit should provide:

1. Attractive and comfortable reception area with appropriate materials to encourage profitable use of waiting time.
2. Private counseling rooms or offices.
3. Conference room for such uses as case conferences; individual and small group testing; special staff personnel such as the public health nurse, school social worker, workers from community agencies, doctor-consultant, DE specialists, interviewing by prospective employers, and representatives of post-high school institutions.
4. Multi-purpose room adjacent to counseling offices for group testing, group guidance instruction, special group work, and in-service training activities.
5. Storage room

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[1] Ibid. pp. 12-13, with modifications.

Activities which go on in the guidance area

1. Individual conferences such as: pupil-counselor; parent-counselor; specialist (social worker, public health nurse, etc.)-counselor; specialist-parent; specialist-counselor; teacher-counselor; employer-pupil; etc.
2. Group instruction in guidance such as: counselor-35 pupils; visiting resource speaker-35 pupils; parent education.
3. Special group work such as: counselor-no more than 12 pupils.
4. Group conferences such as: case conference.
5. Interviews
6. Group and individual testing
7. Clerical Work: records, typing, filing, telephoning, etc.
8. Student browsing while waiting for appointments.

Classroom

Each classroom should have a private conference room for the teacher, equipped with a one-way screen to provide for observation of students singly or in group situations. Observations can be made by the teacher, counselor, visiting specialist, etc.

Waiting Area

1. Purposes: (a) Reception area, (b) Informational resource area, and (c) Place for students and others to wait for their appointment with the counselors.
2. Size: Provide space for a secretary-receptionist and for one student for each counselor available. Additionally should be space available for three or four additional persons, such as parents or teachers who might be accompanying the student.

Counselors' Offices

1. Numbers: one office for each counselor. Also, one additional office should be provided for visiting specialists, etc. who may want to interview students or teachers.
2. Size: sufficient to contain at least five persons since sometimes in an interview, the parents as well as teachers may be present.
3. Construction: Interviews are confidential so rooms should offer privacy and be reasonably soundproof. Use of partial partitions is not satisfactory.
4. Special requirements: Since this will be a pilot demonstration, and possible training school one of the offices should be equipped with one-way screen and communications system (for recording and listening in on interviews).
5. Exits other than through waiting area should be provided for students leaving counseling offices.

Small Conference Room

1. Numbers: Several should be built since a good portion of counselor's time would be taken up by special group work. It would be difficult for seven counselors to share one room.
2. Size: Sufficient to contain at least 13 persons.
3. Construction: Should offer privacy and be reasonably soundproof. Use

of partitions is not satisfactory.

4. Special requirements: Since this will be a pilot, demonstration, and possible training school one of the rooms should be equipped with one-way screen and communications system (for recording and listening in on conferences). Possibly this special room could be adjacent to multi-purpose guidance room, which should be similarly equipped.
5. Exit other than through waiting area should be provided for conferees leaving this room.

## Multi-Purpose Guidance Room

1. Number and size: one large room about the same size as a regular classroom.
2. Construction: Should offer privacy and be reasonably soundproof. Use of partitions is not satisfactory. Movable walls should be installed so that it could be partitioned into three small conference rooms.
3. Special requirements: Since this will be a pilot, demonstration, and possible training school it should be equipped with one-way screen and communications system (for recording and listening in on sessions).
   Possibly this room could be adjacent to the specially equipped small conference room described before.

## Storage Room

This could be one area or several smaller areas, depending on the size of the guidance area and the ingenuity of the architect. Should be locked since tests and other confidential materials may be stored here. Fireproof construction. Should be large enough to store audio-vidual equipment.

## Other Personnel Services Area:

Two offices, similar to the counselor's offices described before, should be provided. These are for the school psychologist and the school social worker.

## NEW EQUIPMENT

It is assumed that the usual office furniture and equipment such as desk, table, chairs, locked files, telephone, book shelves, display files, typewriters, etc., would be provided.

The following new equipment would be required in the following areas:

Waiting Area: Large bulletin board for display of information and materials.
Bookcase for guidance materials.
Display rack for guidance materials.

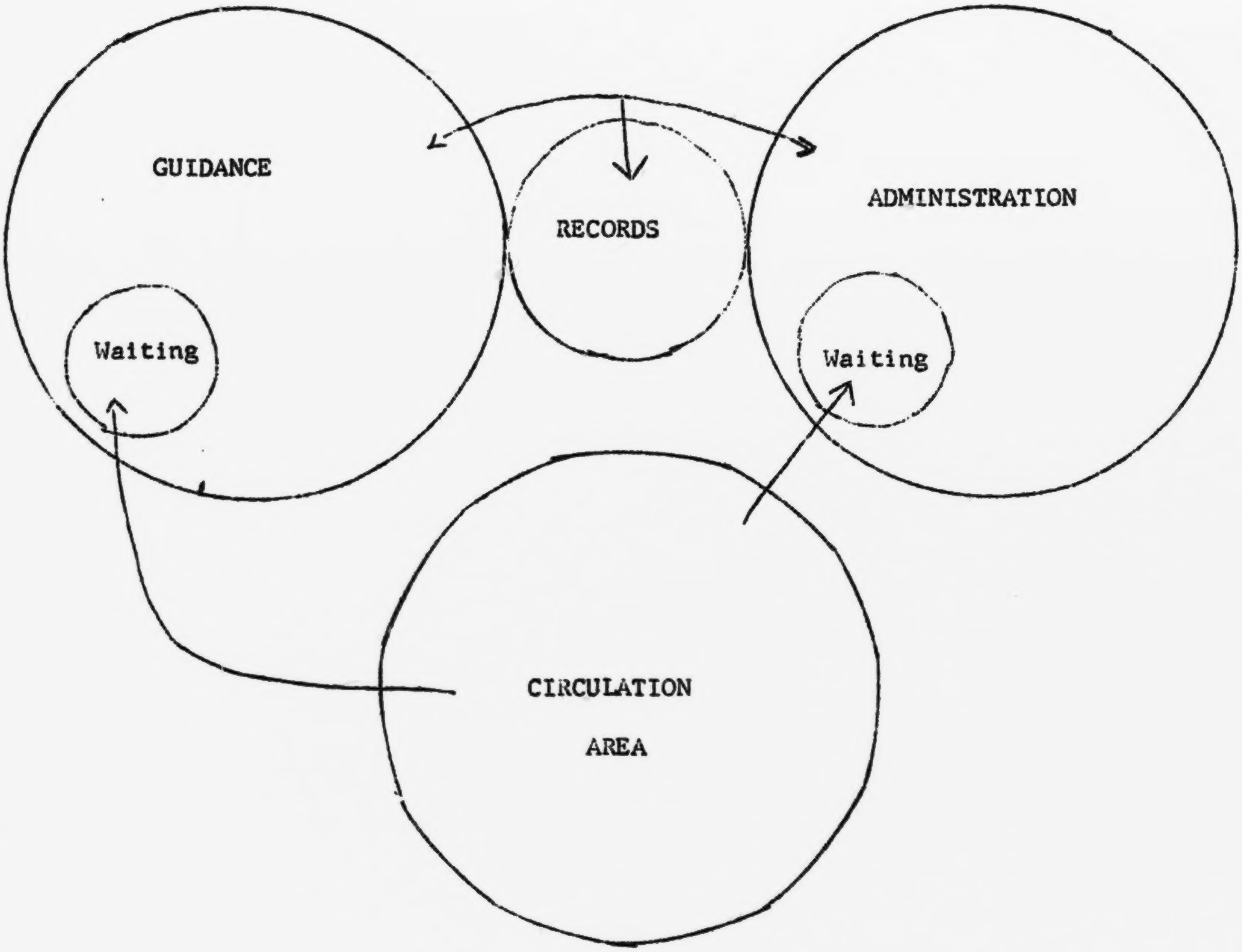
Small Conference Room: Conference size table with chairs to accommodate at least 13 people.
Bulletin board
Chalk board

Multi-purpose Guidance Room: Movable desks to seat at least 35 students.
Storage space, either a closet or a storage wall.
Large bulletin board
Blackout curtains for use with audio-visual equipment.

The following facilities for or audio visual equipment should be provided:

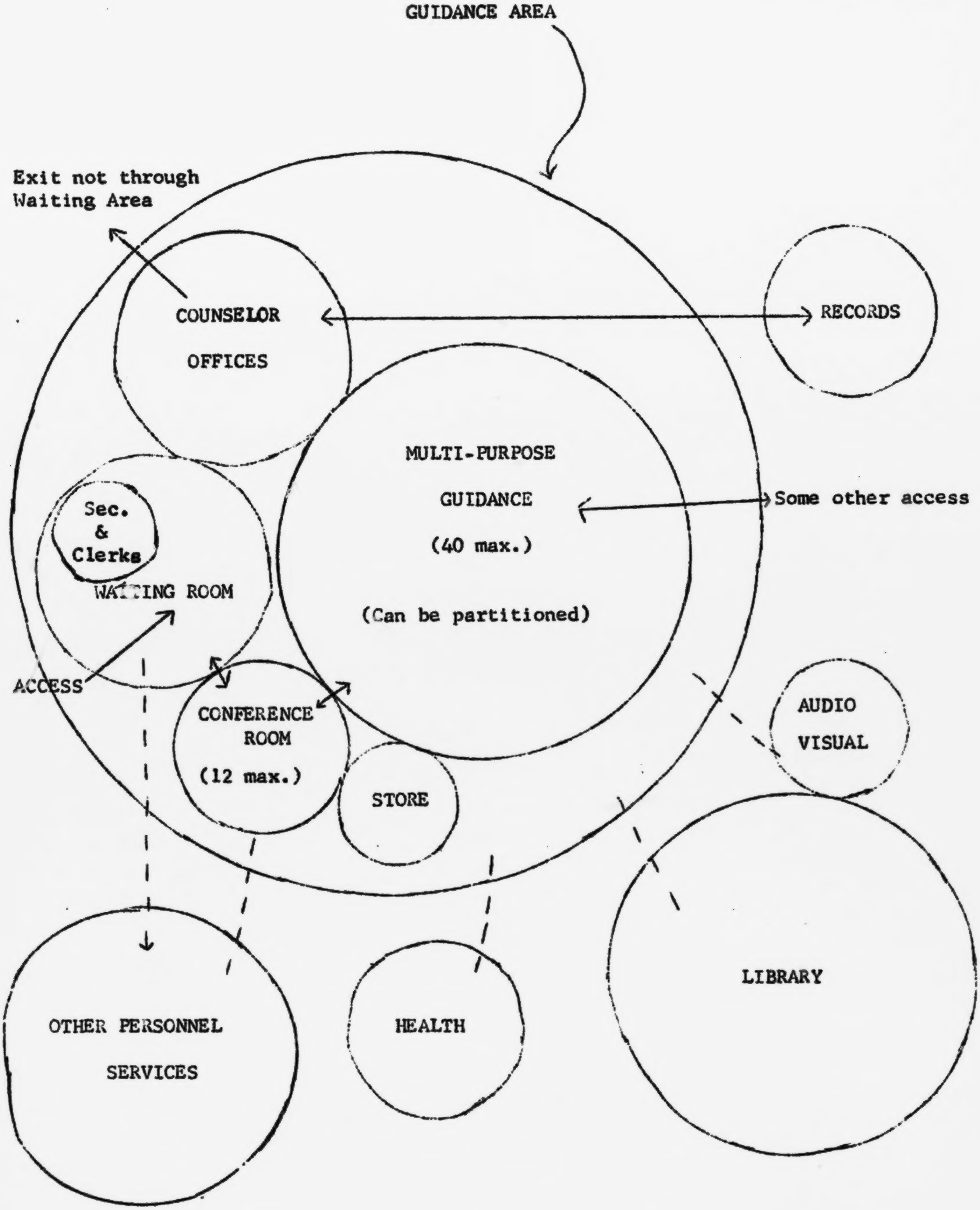
TV outlets
Projector for films and filmstrips
Overhead projector
Opaque projector
Intercommunications system for all offices and rooms
One-way screens as described before.

Educational-vocational and other guidance information materials will be stored and maintained in the school library which would be easily accessible from the guidance area.


GUIDANCE
RECORDS
ADMINISTRATION
Waiting
Waiting
CIRCULATION
AREA

PUBLIC ACCESS

DIAGRAMMATIC SCHEME 1


GUIDANCE AREA
Exit not through Waiting Area
COUNSELOR OFFICES
RECORDS
MULTI-PURPOSE GUIDANCE (40 max.) (Can be partitioned)
Some other access
Sec. & Clerks
WAITING ROOM
ACCESS
CONFERENCE ROOM (12 max.)
STORE
AUDIO VISUAL
OTHER PERSONNEL SERVICES
HEALTH
LIBRARY

DIAGRAMMATIC SCHEME 2

## HEALTH AND SAFETY INSTRUCTION

### Introduction

Trends in the development of health instruction in the high school call for a dynamic course taught by fully qualified school health educators. Advances in medicine and in prevention and care make it necessary for schools to include these understandings in their curriculum, not as an adjunct to Biology or Science or Social Studies or Physical Education but as an entity in intself. Only in this way can the schools really and sincerely educate for enlightened citizenship. Any reappraisal of the "values" of a school program must necessarily consider health not in terms of merely absence of disease and infirmity but "a state of complete physical, mental and social well-being." Health is something more than physical well-being, but though physical health is fundamental, there exists also the need of emotional stability and social adaptability.

### Program

Grade - 10

Enrollment - 500

### Time Allotment

One semester, four days per week.

### Organization - Co-educational

Group presentation - 250 students

Laboratory Classes - 10 classes of 25 students each
5 classes of 50 students each

First Day - Group preparation of content for group presentation, 5 classes of 50 students

Second Day - Group presentation, using TV, movies, guest lecturers, panels, symposia, etc.

Third Day - One-half of group in five laboratory classes of 25 students each for follow-up of group presentation--discussion, questions, reports, planning, etc.

Fourth Day - Other half of group, etc.

Fifth - Teacher planning and preparation. Individual and staff conferences

## Staffing

One full-time School Health Educator

One full-time Health Coodinator

Health Education majors as aides in practice teaching

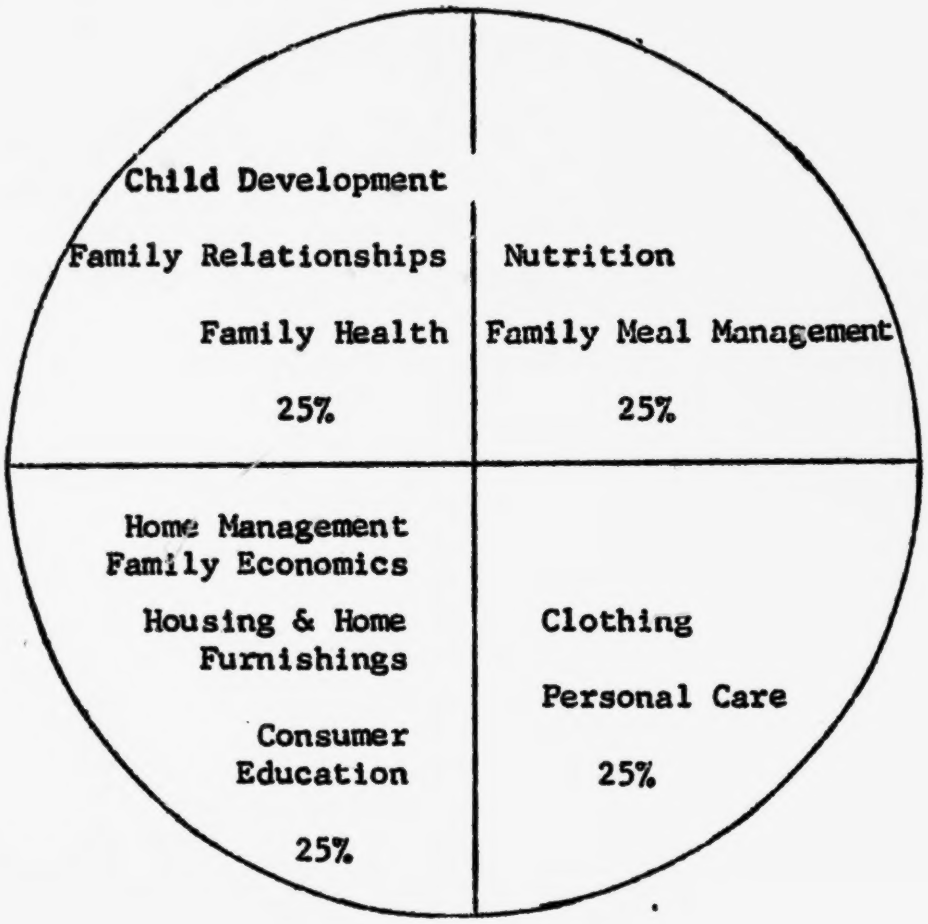
(Note: If social studies at the twelfth grade level is to be history oriented, there needs to be another School Health Educator for that level to cover such areas as narcotics, family health, family life education and other areas more appropriate for the twelfth grade.)

# HOMEMAKING

Homemaking education contributes to the over-all goal of the Department of Education, "To help each child, youth and adult achieve the best growth of his abilities for useful living........"

The homemaking education program, required of all girls at the 8th or 9th grade and elective in senior high, prepares students for their responsibilities as family members now and in the future. Its concern is with these aspects of family living: Family relationships and child development; consumer education; nutritional needs and the selection, preparation and use of foods; design, selection, construction and care of clothing; housing, equipment and furnishings; and management in the use of resources.

Time Allocation -- Areas of Responsibility for a Balanced Program



"We believe that the clearest new direction for home economics is to help people identify and develop certain fundamental competences that will be effective in personal and family living regardless of the particular circumstances of the individual or family."

See Home Economics New Directions, pg. 9, for competences fundamental to effective living.

## "New Directions" for Homemaking Education - Secondary and Adult

### Secondary:

The Odell Survey team made the following two recommendations for Homemaking Education:

1. Increase the enrollment of girls homemaking through careful planning, scheduling, and counseling.
2. Expand the excellent beginning in homemaking for boys.

Hawaii's "White House" Conference Recommendation No. 7, under Topic II, "Promoting Opportunities for Strengthening Family Life" reads as follows:

> "We recommend that family life courses in our public and private schools be strengthened, and that such courses be taught by well-integrated teachers who are adequately trained in these areas."

Based on these recommendations the committee urges that Family Life Education be a part of every student's high school course of study, regardless of his educational and vocational aims, and that it be at least a one-semester course. A pilot program closely related to this recommendation specifically planned for college-bound students, will be initiated in two high schools this fall. Emphasis will be on problems faced by college students in the areas of money management, housing, wardrobe planning, and etiquette.

### Adult Education in Homemaking:

It is proposed that Homemaking Education for Adults be expanded particularly in the areas of Consumer Education, Time and Energy Management, Family Living (forum), Home Equipment and Furnishings, Child Development.

Where the need is indicated and facilities available, the committee suggests that day-time and short-term classes be offered.

Teachers of adults should be offered opportunities to grow professionally through in-service education opportunities and supervisory assistance.

### Suggested Organizational Patterns Covering--

**Implications of Team Teaching for Home Economics:** It is conceivable that many aspects of home economics could be presented in the large-group sessions. Sessions in family life could include the study of family living in order parts of the world through films, talks and similar programs. In nutrition, we might develop appreciation of certain cultural influences in the foods people eat. Art principles, such as the application of color, line and design to clothing and home furnishings, could be demonstrated. The efficient use of space in the home could be shown by the overhead projector. Ideas and values held about certain areas of preparation for marriage might be challenged by a panel or through other devices. The wise use of resources, such as money, time and energy, could be highlighted by drammatic skits. Many others could be enumerated.

Home economics teachers would have little difficulty planning for the small-group discussion, since much of the instruction is now done in that manner. Certain laboratory experiences would lend themselves to small-group work.

For individual study, provision would have to be made for students to explore problems on their own. They might compare different methods of household operations; compare garments which have been constructed by the student with ready-to-wear; observe small children; work on personal financial problems; consider ways of improving personal and family relations; test qualities of various fabrics; and consider countless other problems which are of primary concern to the student.

1. Staffing patterns would include:

   a. Specialized teachers for large-group sessions who would be experienced and usually competent.

   b. General teachers for small group and laboratory sessions.

   c. Teacher assistants (these might be part-time) who would assist in the laboratory and in the supervision of home and community projects and field trips.

   d. Clerks to handle supplies, duplicate materials, grade objective tests, keep records and carry out similar duties.

   In a secondary school, grades 9 - 12, a proposed staffing formula might include:

   1 group leader
   3 specialized teachers
   2 general teachers
   2 teacher assistants, full time
   1 clerk, full time

2. Grouping patterns -- size of classes:

   20% large group instruction, various activities and length of periods
   60% small group instruction, various activities and length of periods
   20% individual study, various activities and length of periods and places.

   Large group -- 75-100 students
   Small group -- 15 students

3. Schedules for students:

| | Length of class | No. of times class meets a week |
|---|---|---|
| Length of class - large group............. | 30 or 60 min. | 2 or 1 |
| Small group - laboratory ................. | 60 min. | 1 |
| Small group - discussion ................. | 40 min. | 3 |
| Individual study ......................... | 60 or 30 min. | 1 or 2 |

4. Teachers schedule:

Time for planning and preparing lessons, time for follow up and time for conferences with students should be provided for all teachers. The teacher for large group instruction should have an equivalent amount of time for preparation. General teachers should have one-half of actual teaching time for these activities.

5. Use of instructional materials and equipment:

Provision for television, radio, record player, tape recorder, teaching machines, movie and filmstrip projectors and a screen would be made in each room. An over-head projector and an opaque projector would be desirable for the homemaking department.

For independent study, chalkboards and bulletin boards might pivot into the room and provide stalls for students. Books, slides, filmstrips, teaching machines, magazines, pamphlets and kinescopes would be available for the student to use in his studies. These materials might be augmented with fabrics, small household equipment, preserved foods of various kinds for testing, clothes, blueprints, floor plans and other resources.

6. Building implications:

In planning specialized classrooms and laboratories, the following should be considered:

a. One large room seating approximately 75-100 should be provided for large group instruction.

b. Specialized laboratories for foods and clothing as well as indoor and outdoor facilities for play schools be included.

c. A family living center large enough for small group discussion and individual study is essential.

d. It is suggested that teachers have a work center rather than just a desk and chair. This center would include plenty of working space plus files, books and teaching materials.

e. The department should be especially adaptable, colorful and attractive so that warm, friendly relations can be developed between students and teachers.

# SCHOOL LUNCH PROGRAM

Aims of the Program:

1. To provide meals which meet 1/3 of the nutritional needs of school children.
2. To provide learning experiences.
3. To establish desirable food habits.

Implications of Recent Trends for School Lunch Programs

EFL plans for elementary schools in the three projects under way indicate no kitchens will be provided for food preparation in elementary schools. Food will be prepared in the secondary school kitchen in the complex and trucked to satellite schools.

An area for receiving hot and cold food for the lunch program should be provided at each satellite school. If hot and cold food trucks are not provided to transport and keep the food until serving time, consideration must be given to providing a range or ranges with ovens and a refrigerator in order to make the food palatable and prevent food spoilage.

Facilities for washing dishes and utensils at the satellite schools are important rather than trucking dishes back to the secondary school kitchen.

Food service can be provided from rolling hot and cold carts or counters in the service area. In secondary schools the kitchen area should be separated from the multitorium by acoustical partitioning to prevent intrusion of kitchen sounds at times when the multitorium is used for purposes other than dining.

For suggested arrangements, see page 74-75, Design for E.T.V.

The School Lunch Committee understands that the three project schools now under way providing facilities for central kitchens are experimental in nature and will not necessarily be a pattern for the School Lunch Program in all new schools of the 21st century.

The committee realizes that there are arguments for and against central kitchens. The following material is presented for the consideration of both secondary and elementary committees:

Arguments for Central Kitchen -- The advocates of central kitchen base their arguments on the following points:

1. Central kitchens result in capital outlay savings because space and equipment requirements in the outlying schools are reduced.
2. Operating costs are reduced because of labor savings.
3. A more uniform product can be provided throughout the district because

food is prepared in one or a limited number of kitchens.

4. Control of food supplies is improved when food storage and preparation is centralized in a limited number of locations.

5. The problems of securing and training personnel are reduced proportionately with the reduction of food preparation centers.

Arguments for Individual Kitchens -- The advocates of individual kitchen operations present the following arguments:

1. Capital outlay savings in central kitchen operations are not as great as imagined because:

    a. Dishwashing facilities usually are provided in the individual units in order to insure proper sanitation.
    b. A small range and refrigerator are usually provided in the individual units for use by community groups.
    c. Dining areas in the outlying schools are usually provided.
    d. Specially equipped trucks and insulated food carts are necessary for food transportation.

2. Central kitchens do not reduce operating costs appreciably because:

    a. Employees are necessary in the outlying school to receive and serve the food, receive direct deliveries of bread, milk and other foods, and to scrape, wash and store dishes and utensils.
    b. Some preparation usually is carried on in the individual units, such as spreading butter on bread and the final preparation of certain dishes.
    c. Transportation costs to and from the individual units must be considered as well as the time required for loading the food carts.

3. A good lunch supervisor provides an in-service training program for school lunch employees in order to maintain high standards of food preparation and service. She also provides standardized recipes in order to achieve uniformly good food products. A good supervisor will develop tools and techniques for food and cost control.

4. A better product results when food is served immediately after it is prepared. Food is more attractive and tasty, thus providing more eye appeal and encouraging better food acceptance by pupils.

5. Menus can be more varied in individual kitchen operations and variety in the menu is most important from the standpoint of pupil participation and food acceptance.

6. Food should be served immediately after it is prepared in order to maintain optimum nutritional values. This usually is not possible in central kitchen operations.

7. The individual kitchen operation permits greater flexibility in making

adjustments whenever participation exceeds that anticipated on any given day. Such flexibility is not possible under a central kitchen operation and occasionally some children must be refused food or the servings to all must be reduced in order to take care of increased, unanticipated participation.

8. There is a tendency on the part of administrators and teachers to take a greater interest in the school lunch program when complete food preparation and service are carried on within the school.

## Conclusion

In order to provide food service in schools where no kitchen facilities exist, it is necessary to transport food from a central kitchen. Also, there may be justification for transporting food to a school in which a relatively small number of children participate in the lunch program. However, it is not possible to make a generalized recommendation either for or against central kitchens until such time as more valid cost data are available. In the meantime, it is suggested that those planning to establish or expand food service facilities:

1. Study the arguments listed above.
2. Visit both central kitchen and individual unit operations and discuss the problems with responsible persons.
3. Provide for flexibility in order to meet changing conditions in future years. As a district expands its food service operation to include additional schools it may be better in the long run to plan facilities at each school capable of eventually permitting individual operating units. Until such time as pupil participation, funds for capital outlay and the availability of qualified personnel justify food preparation in each unit, food might be transported to the individual schools from one or more preparation centers.

In view of Hawaii's School Lunch Program participation, the highest in the nation and in light of the above conclusion, the committee feels that individual kitchens merit consideration.

# INDUSTRIAL ARTS

## I. Objectives

Industrial Arts Education as an integral part of general education emphasizes four major objectives:

(1) To develop in each student an insight and understanding of industry and its place in our culture.

(2) To discover and develop talents of students in the technical fields and applied sciences.

(3) To develop technical problem-solving skills related to materials and processes.

(4) To develop in each student a measure of skill in the use of the common tools and machines.

In the intermediate level the program is designed to give the students a wide variety of exploratory experiences and activities in industrial materials, processes and products. Then at the high school level the student is given an opportunity to pursue the interest stimulated and further work in more specialized programs such as: (1) Auto Mechanics, (2) Drafting, (3) Electricity-Electronics, (4) Graphic Arts, (5) Metals, and (6) Wood and Industrial Crafts.

## II. Modification in Content and Expansion of Courses

### A. Modification of Content

1. More accurately reflects our changing technology.
   - a. Use of transistors in Electricity-Electronics classes.
   - b. Bending plywood in woodwork classes.
   - c. Forming and moulding of plastics.
   - d. Lamination of materials.

2. Developing problem-solving skills.

3. Improving sequential development of content from intermediate to high.

4. More integration of applied sciences and math in terms of fabrication.

5. Accent on design and planning as an integral part of projects.

6. Meeting requirements of engineering colleges and technical schools.

### B. Expansion of Courses

1. Engineering Graphics--combination drafting and descriptive geometry

2. Power Mechanics

    a. Space age
    b. Small engines
    c. Jets and rockets

3. Industrial Technology--testing lab for research, experimentation and testing of industrial materials and processes.

III. Teaching Methods

A. Team Teaching--two men

1. Drafting and Geometry teachers plan and coordinate units where geometrical principles apply in drafting.

2. Two drafting teachers plan together for large group instruction when covering same units.

3. Auto Mechanics and Electricity

4. Metal and Electricity

B. Team Teaching--three or more

1. Drafting teacher plan with all other Industrial Arts teachers for large group instruction in the concept and use of industrial drafting and the language of industry.

2. Art teacher plan with wood, metal, drafting and graphic arts (printing) teachers in large group instruction.

3. Industrial Arts teacher plan for large group instruction in:

    a. Industrial safety
    b. Guidance, occupational
    c. New material, processes and products

C. Teacher Assistant--a teacher without a regular classroom, would relieve, assist and coordinate his services for large and small group instruction.

D. Utilization of Community Resource People

1. Work closer with people in respective industrial areas

    a. Have speakers
    b. Arrange visits

2. Work closer with University of Hawaii and Technical Schools in evaluating respective programs.

IV. Meeting Individual Needs

A. Work Experience Both Paid and Unpaid

1. Senior students who have had acquired sound basic knowledge and skills would be excused to go to work in allied areas with supervision of teacher.

   a. Distributive Education
   b. Part-time Cooperative

B. Technical School for advance training at the senior level if school cannot provide further instruction.

C. Through extended courses technically-vocationally inclined students would be permitted to extend their time in the respective area of interests.

V. Staff and Group Patterns

A. Nine specialists in each of the following areas:

1. Technical Drafting
2. Architectural Drafting
3. Auto Mechanics and Power Machines
4. Electricity
5. Electronics
6. General Metals
7. General Wood
8. Graphic Arts--strong in printing
9. Industrial Technology

B. Three practice teachers or advanced technical students as aides to:

1. Assist in lab demonstrations, organization and management of lab.
2. Assist in individual and small group instructions

C. One classified maintenance mechanic to:

1. Service and repair all hand tools and equipment
2. Assist in instructional areas dealing with shop repair and maintenance.

D. Group Selection

1. Individual Study--5 to 10 students for research and experimentation

2. Small Group Instruction--20 to 25 in all areas of lab work for 90 minutes.

3. Large Group Instruction--demonstrations and related information.

VI. Schedule for Average Students

A. Electricity and Electronics

1. Related and technical information for large group instruction--75 students, for 50 minutes, two times a week.

2. Lab work, experiments and project construction for small group of 20 to 25 students, 90 minutes, twice a week.

3. Independent study once a week.

B. Drafting

1. Lecture-demonstration for large group of 125 students, 50 minutes, once a week.

2. Lecture-demonstration for small size group of 25 students, 50 minutes, once a week.

C. All Other Areas

1. Related and technical information for large group instruction of 75 students once a week.

2. Lab work, project construction for small group of 20 students, three times a week for 90 minutes.

3. Independent study once a week.

D. Other Subject Areas (other than Industrial Arts)--Individual Study

1. Schedule at prescribed times for science experiments and practical application beyond facilities of science lab.

VII. General Specification

A. Space Requirements--General Purpose

1. Large multi-purpose related classroom for groups up to 150-200 students and for small groups of 20 to 25 students.

2. Central storage space for audio-visual equipment and films.

3. General display area for all areas of instruction

B. Space Requirements--Unit Areas

1. Auto Mechanics (150 sq. ft. per student)

a. Classroom for small groups of 20-25 students with reference and library facilities.
b. Work area:
1. Hand tool
2. Chassis

        3. Electrical
        4. Engine
        5. Service
        6. Storage

    c. Office and small parts room
    d. Locker, shower and toilet facilities
    e. Storage--fuel
    f. Tools and equipment--storage
    g. Material and supplies room

2. Electricity and Electronics (110 sq. ft. per student)

    a. Classroom for group of 25
    b. Work area:

        1. Bench
        2. Testing
        3. Machine
    c. Communication room
    d. Project storage
    e. Adult storage
    f. Office and supplies
    g. Tools and equipment room and material storage
    h. Lockers and toilet facilities

3. Metals, General (125 sq. ft. per student)

    a. Classroom combination library for small group instruction
    b. Work area:

        1. Bench
        2. Machine
        3. Hot Metals
        4. Welding

    c. Office and supplies
    d. Project storage
    e. Adult storage
    f. Material storage
    g. Lockers and toilet facilities
    h. Finishing room with storage

4. Wood, General (125 sq. ft. per student)

    a. Classroom combination library, small group instruction class
    b. Work area:

        1. Bench
        2. Machine
        3. Assembling and fabrication

    c. Office and supplies
    d. Project storage

    e. Adult storage
    f. Material storage
    g. Locker and toilet facilities
    h. Finishing room with storage for combustible liquids

5. Drafting (55 sq. ft. per student)

    a. Work area and classroom combination

        1. General drafting area
        2. Model building area
        3. Reference area
        4. Group planning area
        5. Individual storage area

    b. Materials and supplies storage room
    c. Office
    d. Reproduction room
    e. Toilet facilities

6. Graphic Arts (150 sq. ft. per student)

    a. Classroom for group of 20 to 25
    b. Work area:

        1. Composing area
        2. Press area
        3. Bindery area
        4. Planning area

    c. Photography-Lab room
    d. Stock Room
    e. Office and library room
    f. Lockers and toilet facilities

7. Testing Lab (110 sq. ft. per student)

    a. Combination small group discussing and planning area and library
    b. Lab area:

        1. Bench
        2. Testing machines
        3. Machine, general
        4. Fabrication

    c. Office
    d. Material and supply storage room
    e. Display area
    f. Locker and toilet facilities

# LANGUAGE ARTS

I. The committee feels that the Scope and Sequence Chart is an adequate statement of the language arts program except for modifications recommended below.

II. MAJOR MODIFICATION OF CONTENT

A. Emphasize communication of ideas rather than mechanics.

B. Replace the study of traditional prescriptive grammar with a study of the English language.

1. The emphasis will be on the understanding of concepts about language rather than learning rules of grammar.

2. Make the study of language a thinking process

C. In the study of literature, attention should be given to extending reading interests and improving students' literary judgment.

1. The junior novel should be used more extensively.

2. Increase attention given to World Literature, generally and Asiatic and Polynesian Literature, particularly.

D. Reading should be taught by teachers of all subjects; however, English teachers should be responsible for the development of general reading skills.

E. Honors courses in literature.

F. Modification of curriculum for slow learners (it will be necessary to develop separate course of study).

III. KEY LEARNING ACTIVITIES -- communicating, thinking, appreciating

A. Listening: Learning to listen for directions and information; conversations; development of taste when viewing movies and television; note taking; critical thinking; drill in listening for various purposes.

B. Speaking: Being able to express ideas effectively in class or small group discussions; develop some skill in delivering brief talks; oral reading and story telling; skits and drama; correction of minor speech errors.

C. Reading: Development of skill in reading novels, plays and poetry. Improve general reading skills such as vocabulary, comprehension, speed and study skills. Emphasize the development of critical thinking and development of appreciations.

D. Writing: Directed practice in writing weekly themes or paragraphs--maintaining a balance between practical and creative writing; careful rewriting and reorganization of each paper by the student; relating writing to literature and unit themes; sharing the responsibility for good writing by all teachers; essay examination and written reports in most subjects, minimizing drill but emphasizing basic skills such as sentence sense, agreement, idiom and structure.

E. Language: In addition to the description contained in the "Major Modification of Content," teach levels of usage, appreciation of dialectical differences, historical development and changing nature of the language, including interpretation and word meanings.

F. Literature: Less reading of the same work of fiction and more individual selection; inclusion of the teen-age novel in the language arts curriculum.

IV. TEACHING METHODS

A. Unit approach

B. Laboratory experiences

C. Team teaching

V. EVALUATION, EXPERIMENTATION AND RESEARCH

A. Evaluation: SSSP and a general measure of achievement at the high school level, e.g., Reading and English section of the CAT, will provide satisfactory measure of achievement at the high school level. This should be supplemented by more of an attempt at diagnosis of language problems.

B. Experimentation: Controlled experimentation of English language arts laboratory, educational television, teaching machines, team teaching, curriculum modification for slow learners, and honors classes in literature.

VI. ORGANIZATIONAL PATTERNS

A. Staffing:

1. Adequate and qualified professional staff

2. Five teams consisting of three English teachers, one speech teacher plus a paraprofessional helper or clerk, or a total of fifteen English teachers and five speech teachers for the school.

3. Team leader freed, year before the lab is built, to help design it and develop materials.

4. Preservice training of English teachers include study of reading,

semantics and linguistics.

5. Intensive inservice training in newer phases of language arts.

6. Audio-visual technician for operation and maintenance of equipment.

7. Clerical assistance for librarian.

B. Grouping Patterns:

1. No more than 100 students per teacher, also 100 students per class for team teaching.

2. Abandonment of six-period day and use flexible scheduling so that students might conceivably spend two consecutive hours in the laboratory in large groups.

3. Provide for flexible grouping with large (100 students), medium (25-35 ) and small groups (1-15) -- 1-2 hours each.

4. Freedom to allow students to engage in independent work either in the laboratory or in the library-materials center.

C. Teachers' Schedule:

1. Each teacher will conceivably be a member of four teams (teach four groups of 100 students as part of the team).

2. She will have two hours in which to plan with other team members, prepare her presentations and engage in counselling of students.

D. Instructional Materials and Equipment: (Equipment is for each lab unless otherwise noted.)

1-2 television cameras per school (with a small TV studio - see Speech Report)
students' chairs and tables
6 television receivers
1 radio
1 filmstrip projector
1 opaque projector
1 overhead projector
1 16mm. movie projector
1 public address system (built-in)
lab library of 300-500 titles
School library, 10 titles per student (minimum)
Phonograph records, tapes, filmstrips, etc. in school library-materials center
1 phonograph
1 binaural tape recorder and 1 tape deck with 12 earphones
built-in movie screen
Squawk box communication with sound proof rooms
7 typewriters - 6 for student use, 1 for teacher use
1 spirit duplicator
4 filing cabinets

## E. Facilities

1. 50 square feet per student for lab, including sound-proof rooms
2. Four sound-proof rooms per lab with tables and chairs, accommodate 12 students: these rooms to be used for listening to phonograph records, group discussions, recording voices and group writing projects (one wall glass)
3. Adequate storage space for audio-visual equipment and supplies.
4. Raised platform at one end of the lab, 24"x10'x24'
5. Blackboard and tackboard space
6. Cupboard space
7. Bookshelves for class library and texts
8. Separate workroom-office for teachers, 12'x36', in addition to lab
9. Air conditioning

# JOURNALISM

## MODIFICATION IN CONTENT

More emphasis on analyses of newspapers and magazines, such as New York Times, Christian Science Monitor, local newspapers; Time Magazine, Newsweek, U. S. News & World Report, picture magazines, pulp magazines.

More emphasis on writing for different types of publications, such as newspapers, TV, feature stories for magazines, even pulp magazines (basic ten plots).

Newspaper to be end result of classes, not objective for classes.

Yearbook only for high school.

## Secondary Language Arts - Journalism

## KEY LEARNING ACTIVITIES

| | |
|---|---|
| Reading: | analyses of newspapers, news magazines |
| Writing: | for school newspaper, for local newspapers, for TV stations, for magazines |
| Listening: | to radio, TV broadcasts, to compare treatment of news; class discussions; script treatment |
| Speaking: | Discussions in analyses of newswriting, TV script reading |
| Reasoning: | Analyses of propaganda techniques, of pulp magazines, of news magazines, etc. |

## STAFFING

Professional teacher, well-qualified full time, to plan, prepare lessons, gather necessary material. Instruction assistant to carry out plans, assist in preparing lessons, work with small groups. Clerical aide for bookkeeping, librarian work, typing, making out receipts, etc.

Close correlation with speech teacher in TV; close correlation with science teacher in photography; also art teacher.

## SCHEDULE

Approximately two classes in beginning Journalism, two of advanced Journalism, and 1-2 for annual production.

Large groups when showing films, TV aids, speakers. Smaller groups in analyses of own work, discussions, analyses of newspapers and news magazines, writing of news stories, acting out of TV script.

Journalism could be semester course, with everyone introduced to newspapers, magazines. Only those interested could sign for course which publishes newspaper.

## EQUIPMENT

Large editorial table or layout table, movable chairs and tables, approximately 12 typewriters, art and drafting supplies.

## FACILITIES

Approximately 60 square feet per student or 2000 square foot classroom. This space will contain two small glassed-in rooms--one for typing, the second for editorial work (approximately 225 square feet each). More cupboard space than normal classroom. Lighting approximately 75' candles.

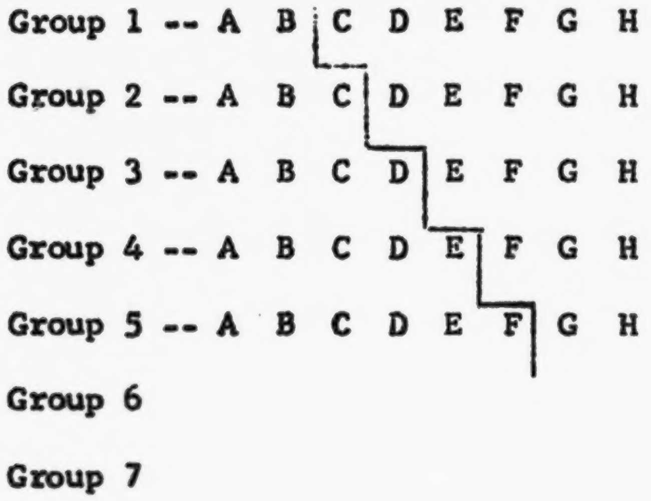
# MATHEMATICS

## INTRODUCTION

Mathematics is a discipline in which competencies are attained by building skills and understandings systematically. Learning takes place at individual rates.

Too often in the classroom the pace is too rapid for all to gain the necessary proficiencies. To enable the student to more nearly progress at his own rate of learning, the following program is proposed:

I. The structure of the mathematics program will be modified to eliminate the compartmentalizations of algebra, geometry, etc. There will be a sequential flow of mathematical learnings where concepts will be introduced and skills developed at the proper place in the development of the mathematical structure. The mathematics program for the high school will be broken into sub-units where each student will complete, in a prescribed length of time, the number of sub-units that are in keeping with his rate of learning. The sub-units for the high school course will here be designated by the letters A, B, C, . . . . H.



Group 1 -- A B | C D E F G H

Group 2 -- A B C | D E F G H

Group 3 -- A B C D | E F G H

Group 4 -- A B C D E | F G H

Group 5 -- A B C D E F | G H

Group 6

Group 7

The dark line indicates the sub-units covered by the different groups in a prescribed period of time.

At the beginning of the first year, grouping will be as nearly homogeneous as possible: Group 1 may cover only sub-units A and B; Group 2 may cover only sub-units A, B, and C, etc. If a student in Group 1 is progressing faster than others in the sub-unit A, he may be moved to Group 2 where the rate is faster. If a student in Group 3 is falling behind in a sub-unit C, he may be moved to Group 2 where sub-unit C is taken more slowly. Thus, the sub-units make for flexibility in regrouping and all students move at their own rate.

II. Teaching Method

- Team planning
- Limited group teaching
- Limited team teaching

With at least two groups meeting at the same time, weekly presentations will be made to combined groups. In that the groups move at different rates the presentations would necessarily be of general interest. During the time a teacher is making a combined-group presentation in a field of his special interest or competency, the other teachers will be free to work with smaller groups. A teacher who has special qualifications might also present certain phase of a sub-unit to each group.

III. Staffing -- It is imperative that there be

- Qualified and motivated mathematics teachers in each classroom
- A specialist coordinator
- A research person available
- Clerical aides (mimeographing, taking attendance, keeping laboratory inventory)

IV. Scheduling -- Class periods of 90 minutes three times per week will make it possible to

- Have time for group presentations
- Have time for follow-through after group presentations
- Make effective use of laboratory
- Give time for supervised study

Preparation periods will be scheduled for teachers.

V. Physical Plant

- Classrooms will be in units of two or four rooms with doors or panels, that may be opened. Each classroom will contain 22 sq. ft. per pupil. Each will be equipped with:

  exhibit shelves and counters
  bookshelves
  storage shelves and drawers
  bulletin boards
  chalk boards (plain, squared, circular)
  projection screen
  demonstration table
  teacher's desk and chair

- Laboratories adjoining the classroom will have available for students' and teachers' use:

  storage space for such items as
    demonstration slide rules
    parallel rulers
    charts
    tools for construction work
    compasses
    measuring devices (meter sticks, T-squares, etc.)
    geometric models
    sundials
    sextants
    drawing equipment
    weighing devices

shelves for books
demonstration tables
display and work counters
bulletin boards
drawing boards
chalkboards (plain, squared, circular)

- The Teacher Center which will adjoin the classroom and laboratory should contain:

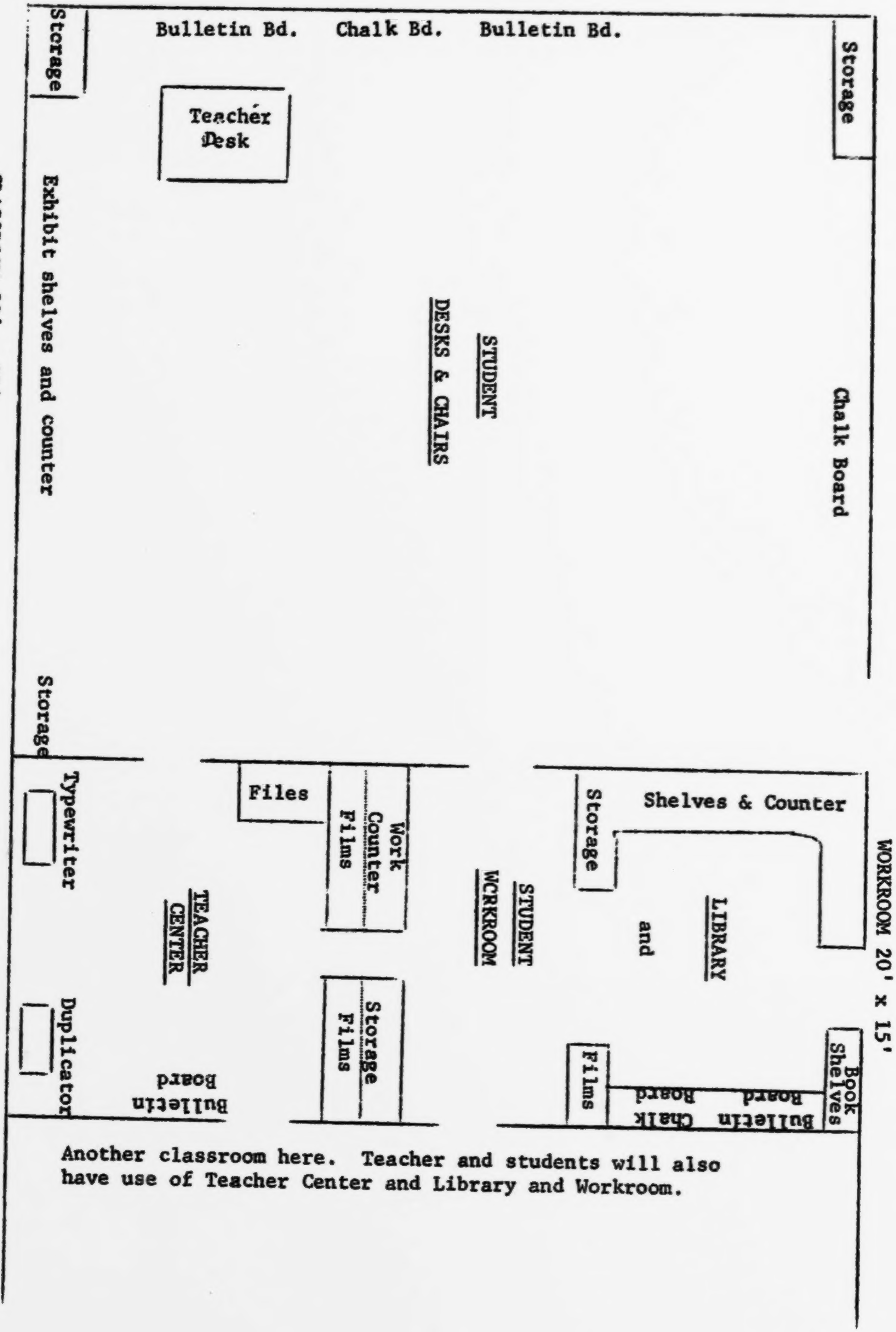
  files for student records
  files for teaching plans
  mimeograph equipment
  storage space (films, paper, demonstration materials, etc.)
  work counters
  bookshelves
  teachers' desks
  typewriter with mathematical symbols

## VI. Advantages

- Students progress at their own rate of learning
- Students have opportunities in the laboratory to build and clarify concepts
- Students have greater opportunities to develop independent studies
- Teachers' talents are used more efficiently
- Teachers share each other's strengths

## VII. Possible Problems

- Pupil-teacher ratio
- Finding qualified teachers


Storage
Bulletin Bd.
Chalk Bd.
Bulletin Bd.
Storage
Teacher Desk
Exhibit shelves and counter
CLASSROOM 30' x 30'
STUDENT DESKS & CHAIRS
Chalk Board
Storage
Typewriter
TEACHER CENTER
TEACHER CENTER 10' x 15'
Duplicator
Bulletin Board
Files
Work Counter Films
Storage Films
STUDENT WORKROOM
Storage
Shelves & Counter
LIBRARY and
WORKROOM 20' x 15'
Films
Book Shelves
Bulletin Board
Chalk Board

Another classroom here. Teacher and students will also have use of Teacher Center and Library and Workroom.

# MUSIC

## Areas of Concern

1. Need for earlier introduction of orchestra and band instruments.

   If the recommendations for the expansion of the instrument program in the elementary schools are followed, it will mean that the "beginning band" classes at the 7th grade level will be "bands" not "beginning instrument" classes. The orchestra and band classes at the intermediate level should be scheduled five periods a week but with the possibility of teaching only one segment of the entire group part of the time. The following is a sample schedule:

   BAND

   Monday - full band, 40 - 50 minutes
   Tuesday - upper brass, 20 minutes. Lower brass, 20 minutes.
   Wednesday - full band, 40 - 50 minutes
   Thursday - upper wood winds, 20 minutes. Lower wood winds, 20 minutes

   This should be supplemented by work in out of school hours with private instrument lessons.

   An electric tuning machine and overhead or opaque projector would be of great value in band and orchestra classes. Small practice rooms and storage areas would be needed as well.

2. Need for expanding the elective vocal music program during the intermediate school grades.

   With rare exceptions, there are no elective vocal classes offered in grades 7, 8 and 9. If the recommendations for singing classes in the 4, 5 and 6th grades are followed, a sound, sequential vocal program could be developed in the intermediate schools that would have real meaning for the participants and be an excellent preparation for senior high school choirs and glee clubs. A piano, record player, tape recorder and a projector would be needed in a room with acoustic and space-wise planning to accommodate the classes. In the intermediate school, this type of class might be scheduled opposite another class on a 3-2, 2-3 semester plan, or on a 5 day per week schedule.

3. Need for providing a broader senior high program which will attract more students in those grades.

   The high school needs a music curriculum that will attract pupils who are not interested in "performing groups" such as bands, orchestras and choirs. Two such classes are suggested. Following is an outline of a class developed for a local senior high school.

   A. Introduction

      (1) The name of the class "General Music" should be avoided as it carries the connotation of required elementary school

music. Perhaps "Exploring Music" or "Exploratory Music" would be more attractive.

(2) Organization

(a) This kind of class thrives on large, multi-grade hetrogenous groups as one of the real values that may come out of this class is understanding the musical viewpoints of people with varying music backgrounds.

(b) It may be practical to schedule this class during the last period of the day so that field trips may be planned without interfering with other classes. Scheduling the classes before lunch may be a second choice.

(3) Basic Philosophy

(a) Everyone can enjoy music in some way.

(b) Planning classroom activities is done through student-teacher participation.

(c) Although this class is basically a non-performing group, it does not eliminate the possibility of taking part in public programs.

(d) All activities undertaken will be planned from a student-interest point of view.

(e) The musical opinions and judgment of each member of the class has value and will be respected.

(4) Desirable Outcomes

(a) Creating insight into the role of music in the life of the pupil, both in school and after graduation. For a definition of musical insight, see "Music For Everyone" pages 8 & 9.

(b) Guidance and instruction for the youngster whose musical talents have become evident through participation of classroom activities.

B. Suggested Activities

(1) Organization of small groups or committees with common musical interests.

(2) Integration with other subject areas such as social studies, drama, language arts, science, mathematics.

(3) Learn to play simple chords on such instruments as piano, ukulele, guitar or autoharp. Provide experiences with many kinds of rhythm instruments.

(4) Enrich classroom activities through inviting visitors to the

classroom. The following is a list of people who may be considered: Piano teacher, choir director, jazz musician, district or state office music specialist, symphony demonstration team, composer, arranger, instrument repairman, member of the Women's Symphony Society, an authority on national music such as Hawaiian, Oriental, Philippine, Samoa, others, principal or other teacher, interested parents, visiting mainland soloists, music union official, vocational guidance person, acoustics engineer.

(5) Build record program on a theme. (It will become obvious some of the recorded material may be used for singing or rhythm activities.) Possible recorded program subjects might include: Dance music, special days, special events, school songs, military, contrasting church music, composers best known for one kind of music.

For example, a recorded program on composers best known for drammatic music might include the following: Rogers and Hammerstein, Rombert, Victor Herbert, Gilbert & Sullivan, Wagner, Verdi, Mozart.

Other composer groups might include composers best known for marches, symphonies, sacred music, love songs and others.

Modern song melodies derived from classic themes.

Show background music (movies, television, radio), national anthems (Hawaiian, U. S., England, German, French, Italian, others).

(6) Learn to play simple instrumental accompaniments for songs sung by the class. See approved text and supplementary book list for songs.

(7) Discuss and experiment with arranging music in a variety of styles.

(8) Examination of the "form" of music. This should be from the simple, short song forms to the extended sonata allegro of longer works.

(9) Science in Music

Examination of what makes pitch, tone and volume. Most new science texts have a section on this subject. Science teachers may be of assistance in planning this unit. An interesting activitiy is to examine the scientific differences between "noise" and music. Consideration of stereophonic and hi-fi principles should be an element in this activity.

(10) Understanding of the care and maintenance of many kinds of instruments.

(11) Plan with the Honolulu Symphony for a "Farrington Concert." Mr. Turkin, Manager of the Honolulu Symphony, or Mr. Richard Lum, Band Director at McKinley High School, can outline this plan for you.

(12) Plan a music department building including classrooms, practice rooms, auditorium, library and office space, instrument and uniform storage, and instrument repair area. See DE specs for music building in the school building code for guidance.

(13) Maintain Pupil Notebooks

The purpose of these notebooks is not primarily grading, but rather a book that will have permanent value to the pupil after the course has been completed.

(14) The teacher should keep a running account of classroom activities for purposes of evaluation and planning classes of similar nature in the future.

(15) Discuss planning a home record library.

(16) Possible field trips.

a. Examine and listen to pipe organ

b. Visit a music store to examine pianos, electric organs, other musical instruments and equipment and learn some of the problems of merchandising these items.

c. Visit a television or radio station during rehearsals or actual broadcasting.

d. Visit the Department of Education audio-visual center.

e. Plan a class dinner and attend as a group, a symphony concert, a Honolulu Community Theatre music production or other musical program.

f. Visit a variety of music classes in your or other schools.

g. Observe classes at the UH Music Department.

h. Explore the music department of the Library of Hawaii.

i. Attend a professional recording session.

j. Attend a rehearsal of jazz combo, large dance band, symphony, church choir or other music group.

k. Inspect an instrumental repair shop.

A second class that would fall into the classification of a non-performing group would be a program in the humanities that would be designed as a cross section of the creative arts. This would include art, literature, drama, dance and music.

After initial discussions with the committee and subject area directors, it was felt that this would be the type of class which would attract the academically gifted child as it offers unlimited possibilities for individual research, small group study and large group activities. The approach would be on the basis of UNITS of work and the activities would not be strictly appreciation but would include active participation whenever practical. Sample unit subjects would include:

Man's Quest for ........ Freedom
Love
Laughter
A Divine Being
Escape from Realism
Beauty

Ample space for large group meetings, small committees and individual listening, plus a piano, tape recorder, record player, radio, film projector and access to standard instruments of the band and orchestra would be necessary to present either of these classes.

4. Need to provide prospective elementary classroom teachers with basic music skill which will complement the study they will receive at university level.

   The Secondary Music Committee strongly recommends the development of a course tentatively called, "Introduction to Musicianship," to be offered in the eleventh grade for prospective elementary classroom teachers.

   The Department of Education and University of Hawaii are working on a plan for pre-service education to supplement the University of Hawaii course #150 as follows:

   The University of Hawaii will develop a "placement" test which will be a composite of the final examinations of the four sections of #150. This test will be shown to the prospective teachers in the high school as part of their counseling program, as an indication of the kind of music education they will receive at the University of Hawaii. Pupils who feel they would have difficulty in passing such a test will be counseled into the Introduction to Musicianship course which will be planned with the University of Hawaii faculty and will in no way duplicate or take the place of #150 but rather be a preparation for it. Principle areas of course content would be centered around singing, simple sight reading and use of classroom instruments.

   The University of Hawaii will develop two elective courses to follow #150. The first class will be for those pupils who did well in #150 and will develop musical skills and insights in more depth than was possible in the large 150 classes. The pupils from this class may well assume some leadership in the total music program in the elementary schools to which they are assigned. The other University of Hawaii elective class will be for those who had more difficulty in #150 and will concentrate on the development of basic music skills to give these future teachers the ability and confidence to present a minimum music program in their classrooms.

## General Considerations

### Instrumental Program

1. Need for parental education in the following areas:

   A. The school department will try to provide instruments for beginning students insofar as possible but if after a period of one semester to one year the student plans to continue, he must provide his own instrument if he plays one of the following: clarinet, trumpet, sax, trombone or violin. The school will continue to provide the unusual instruments such as bass horns, bassoons, oboes, drums, etc.

2. Promotion from one band to another is not automatic. A member of a 7th grade beginning band will only be admitted to 8th grade band on the basis of the approval of the band instructor.

3. Membership in a senior high school band for three years can be justified as a sequential, valuable experience as following:

   A. Moving from third to second to first parts within a section. Each part is increasingly more difficult and needs additional study and practice.

   B. Although high quality performance is expected every year, the actual compositions studied change from year to year with the exception of standard numbers such as school and patriotic songs so each student, over a period of several years, has a chance to become acquainted with different composers and styles of writing.

   C. A three year study plan in the senior high school gives the pupil a chance to refine his own performance, to more deeply appreciate good music and develop insights that will show him how music can be a vital part of his post-school years.

### General Music

1. The committee recommends that required General Music be scheduled for two periods a week in both the seventh and eighth grades. A part-time program of music in these grades is easier to motivate, takes the boys through their change of voice year, and leads more naturally into the elective program beginning at the ninth grade.

2. If possible, the three grade system be used in the General Music Classes.

3. The State and district offices should offer more help in planning the General Music program in its relationship to the other subject areas. Note: The effort to combine General Music and Social Studies at the 7th grade level on Oahu this year will be evaluated and reported later this spring as a basis for next year's planning.

4. General music teachers and other music specialists should work together carefully early in the seventh grade to identify those pupils who should be guided into the elective music program. Change in class schedules should be made possible for those identified youngsters.

## General Recommendations

1. That all intermediate and senior high schools move to a seven-period day as soon as possible.

2. The committee recommends a staggered schedule for teachers and pupils with some activities carried on before the usual opening of school and others extending after the normal close of school in the afternoon. This staggered schedule should not extend the number of "on duty" hours for any member of the teaching staff.

## ORGANIZATIONAL PATTERNS

1. In a student body of 2,000 about 205 or 400 pupils can be expected to take part in music activities.

2. Staffing: Three teachers. One band, one orchestra, one vocal. These three, with the help of social studies and other subject area teachers, would form a team to teach the "non-performing" classes. One full-time assistant to do clerical work and supervise individual practice and study.

3. Pupil Schedule: All "performing" groups should be scheduled five times a week with possible sectional rehearsals. (Note: see page one for sample.)

   Large non-performing classes would meet together once or twice a week. The balance of the schedule would be taken up with small groups working on projects of mutual interest or individual research.

4. Teacher Schedule: Not more than 25 periods of instruction a week. At least five periods a week for preparation and help for small groups or individuals.

   Be members of music teaching team.

   Available for individual pupil conferences.

5. Implications for Facilities

   Instrument room (band and orchestra) for groups of up to 100 pupils.

   Vocal and non-performing groups, room up to 150 pupils.

   Standard size room for theory or small group listening and discussion activities.

   Minimum of six practice rooms.

   Two ensemble rooms.

# PHYSICAL EDUCATION

## Introduction

I. "Definition of Physical Education[1]

"Physical education refers to that part of the school program that provides guidance and instruction through physical activities designed to meet the needs of students in developing their physical efficiency and recreational skills, and, along with other phases of the curriculum, provides maximum opportunity for growth physically, mentally, emotionally, and socially.

"The secondary physical education program is a school's inclusive plan and provision for instruction, laboratory experiences and advanced learnings in physical education. The education program includes class instruction, intramurals, extramurals, and interschool activities.

". . . Since the development of physical efficiency, recreational skills and well-adjusted personality are part of the needs of all students as members of present-day civilization, physical education becomes as indispensable component of general education."

II. The Objectives of Physical Education

Physical education provides a wealth of experiences which are particularly important in helping youth:

1. Develop and maintain physical efficiency
2. Develop use of physical skills
3. Conduct himself in socially acceptable ways
4. Enjoy wholesome recreation

III. Types of Activities[2]

Rhythms
Combatives
Gymnastics and self-testing activities
Individual sports
Team sports
Aquatics
Games of low organization
Co-educational activities
Outdoor education

IV. Minimum physical education requirements for graduation[3]

| | | |
|---|---|---|
| 4-year high school . . . . . . . . . . . . . . . . | 1 | credit |
| 3-year high school . . . . . . . . . . . . . . . . | 1/2 | " |

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[1] Department of Education. Youth Fitness - Hawaii. Hawaii: The Department,'59,p.1-2

[2] Ibid. P IV-6

[3] Department of Education. The Program of Studies for the Secondary Schools of Hawaii. Hawaii: The Department, February 1958, p. 4

The committee recommends that the minimum requirements be revised to read:

| | |
|---|---|
| 4-year high school . . . . . . . . . . . . . . | 3 credits |
| 3-year high school . . . . . . . . . . . . . . | 2 " |

(Required in grades 9, 10, 11 and elective in grade 12)

This recommendation approaches Dr. James B. Conant's comment that each student should have one hour of physical education every day.

I. Classroom organization best suited to carry out the instructional program.

A. Scheduling

1. Pupil
   Five periods a week
   Minimum of 50 minutes per single period
   At least one double period per week

2. Teacher
   One free period per day

B. Staffing

1. Twelve (12) teachers--6 for boys and 6 for girls (over-all pupil-teacher ratio --1-35)
   Selection of physical education teachers should be according to their special interest areas--making it possible to use them as lead teachers for the large groups in the various types of activities.

2. Four (4) teacher aides (practice or intern teachers)
   Two (2) men and 2 women to assist in instruction, testing, grading, etc.

3. One clerk
   Duties: duplicating materials
   keeping records, inventories
   general secretarial help

4. Custodians
   One man and 1 woman for locker and shower areas, gymnasium and classrooms
   One man for field maintenance
   One man for pool upkeep

C. Grouping

1. Regular class size of 35 by grade level
(Two or 3 or 4 sections scheduled for the same period may combine for large group presentations.)

2. Classes may be divided into smaller groups if the type of activity merits more individual instruction, or the grouping may be according to ability in the activity, social development, physical development.

3. Corrective and adaptive classes. These serve the needs of students unable to profit by programs established for "normal" youths.

II. Activities and teaching methods recommended.

A. Unit Approach

Large group presentation by lecture, demonstration, and audio-visual aids are methods of initiating an activity, developing interest and enthusiasm and instilling the proper philosophy toward the activity. The presentation can be given by the physical education teacher whose special ability is in the activity being studied, a resource person, or a specialist within the school.

B. Unit Participation

Smaller groups practice skills, discuss rules and attitudes, and apply same to the activity.

C. Unit Evaluation

Physical fitness tests
Practical skill tests
Knowledge tests
Teacher observation and individual conferences
Attitude checklists
Tournament competition

D. Research

Continual research will be conducted to seek the answers to the following questions:

1. Are we utilizing the facilities, equipment and staff abilities to the maximum?

2. Are our students more physically fit because of the increased credit requirement?

3. Are our students gaining more learnings by including team teaching?

III. Curriculum changes anticipated.

None. The new secondary physical education guide includes a comprehensive program which, to date, has not been implemented in every high school. This will require more staff and facilities as proposed in this report.

IV. Specialized printed materials and audio visual equipment requiring classroom space.

A. Materials

1. Professional library for the department including books, periodicals, etc.

2. Filmstrips, slides, films

B. Equipment

1. Audio-visual equipment such as record players, film and slide projectors, P. A. system

2. All the necessary sport equipment for the activities in the program

C. Facilities

1. Swimming pool
2. Gymnasium
3. Surfaced multi-purpose courts (tennis, volleyball, basketball)
4. Indoor badminton and handball courts
5. Sufficient field acreage for football, baseball, track, soccer, speedball, field hockey, etc.
6. Locker and shower facilities
7. Classrooms (large to small)--proper ventilation and darkening for viewing films
8. Individual conference rooms

The committee recommends that national standards be followed in relation to size and number when the above are developed.

V. Strengths as an outgrowth of the new proposals.

A. Increased credit requirement

1. Students should be more physically fit from daily participation in physical activity

2. Bridges the gap between high school and college

3. Offers the student more opportunity to learn activities for leisure-time participation both as a student and as an adult

4. Develops more of an appreciation for physical activity and affords the students an opportunity to study one activity in depth

B. Added personnel

1. Improved instruction

2. More individual guidance possible

3. Standards of sanitation and cleanliness will be met with the added custodial help

C. Added facilities

Makes possible the implementation of the well-balanced, varied program of physical education as recommended in the new secondary physical education guide.

D. Grouping

1. Progression of subject matter is possible when students are grouped by grade.

2. Fulfillment of the philosophy of education for all is possible when the "atypical" boys and girls are grouped together and taught by a person who is qualified to teach adaptive physical education.

VI. New problems one can anticipate which should be given careful consideration in implementing the foregoing plans.

A. Interpreting the merits of additional credit requirement in physical education to the administration.

B. Scheduling the "atypical" students.

C. Grouping by grade when other subject areas may request grouping by I.Q., achievement, etc.

D. Recruitment of qualified personnel, especially women (this is a national problem at present).

# SCIENCE

## Objectives

The objectives of the secondary science program are two-fold. One is to provide the essential facts, concepts and understandings about his physical and biological environment together with effective problem solving techniques in order to prepare the graduates for the responsibilities of tomorrow. The other is to provide a program that will meet the interest and vocational goals of the students.

## Trends in Secondary Science Education

- A movement away from the emphasis on the "verification" of basic principles of science and toward an emphasis on the inductive development of a functional understanding of the principles of science through problem-solving performed by pupils under the guidance of the teacher.

- A trend away from using interesting and practical technologies as the central core of science courses and toward the use of these technologies as illustrations and applications of principles of science in everyday living.

- A movement away from teacher demonstration and toward pupil experimentation and problem solving.

- A trend away from simple manipulations directed by detailed instructions and occupying single class period and toward pupil-teacher planned experiments, the performance of which may require several days or weeks and for which apparatus must be left in position for the duration of the experiment.

- A trend away from instruction in basic science only for college-bound pupils and toward instruction to develop an understanding of basic science principles, concepts, and methods as a component of education for all pupils.

- A trend toward the extension of the science curriculum by the introduction of new units or courses such as nuclear physics, radioactive isotopes, antibiotics, and astrophysics, which require more over-all space in the building as well as additional specialized spaces removed from the main school building.

## Curriculum Developments

During the past three or more years, many scientists and educators have taken a good hard look at the secondary science program and have recognized that basic changes in content and approaches to teaching were necessary. As a result, teams in the areas of physics, biology and chemistry comprised of outstanding scientists, teachers, supervisors and college educators and scientists have set the wheels in motion which will make major changes in both curriculum and methodology. A few of the teams are:

| | |
|---|---|
| Physics | - PSSC, Physical Science Study Committee |
| Chemistry | - CBS, Chemical Bond Study<br>CHEMS, Chemical Education Materials Study |
| Biology | - BSCS of AIBS, Biological Science Curriculum Study of the American Institute of Biological Sciences |

## Key Learning Activities and Methods

Opportunities to get information and ideas. Effective ways of transmitting reliable information and ideas must be utilized so that students will be motivated and be well informed.

Large group instruction seems to be the most effective way of transmitting essential information and ideas to students. Here, the most effective human resource and the audio-visual materials and equipment can be utilized. Such instruction can then be a film, a lecture-demonstration, a closed or open circuit television program, a tape, a sound filmstrip, a resource person, or a combination of any of these. Sub-grouping according to ability may be made to further clarify or challenge students.

Opportunities for discussion and experimentation. This is an important activity because unless students have the opportunity to raise questions and challenge ideas evolving from the multitude of information, confusion and doubt will result. Students should also have the opportunity to study and experience some of the effective experimental approaches used by scientists in problem solving.

Small group discussions and experimentation will provide the most effective way to accomplish this aspect.

Opportunities for individual study and experimentation. This is a vital area as individual interests and abilities can be met through such activities.

Research projects and study seem to be best suited for this phase.

## Organizational Patterns

### Staffing a School of 2,000 students

- About 10 teachers needed, 5 in the biological sciences, and 2 in physics, 2 in chemistry and 1 in physical science.
- Two basic teams in team teaching can be formed, the biological sciences and the physical sciences.
- Sub-teams of each can be formed, such as general biology, advanced biology, chemistry, physics and others as needed.
- Three full-time teacher aides for the science department.
- Four full-time clerks, 2 for storeroom and 2 for the teams.

### Grouping Patterns

- Large group instruction, about 100 - 120 students meeting one period daily, or about 150 - 200 for modified schedule (1 large and 2 double period sessions).
- Small group discussion and experimentation, about 25-30 students with possible sub-grouping to 12-15 students.
- Individual research and study will be part of the small group instruction.
- Grouping of students should be based on ability and interest.

### Schedule for Students

- 55 minute class period, 6 periods per day.
- If class meets one period each day, one or two large group instruction per week.
- If schedule modified, one large group instruction with two double periods for discussion, experimentation and individual study.

### Schedule for Teachers

- 25 teaching periods per week
- 5 periods per week for planning, preparation, conferences, etc.
- Member of a teaching team
- Be responsible for sections
- Be available for student guidance and help in experiments.

## Implications for Facilities

### Large Group Instruction Room

- Room for about 200 students
- Elevated seating with adequate arm tablets
- Large demonstration table (fixed) with all facilities
- Completely designed for audio-visual presentations
- Three televisions for open and closed circuits. Closed circuit camera should be available for close ups.
- High ceiling with hooks and acceleration and pendulum experiments and demonstrations
- Air conditioned

### Biological Science Complex

- A centralized multi-purpose room with provisions for (1) storage of all equipment, models, charts and supplies, (2) a science library with essential science reference materials and magazines, (3) display area for student projects and others on movable display cases, (4) work or construction area (5) closed circuit TV studio.

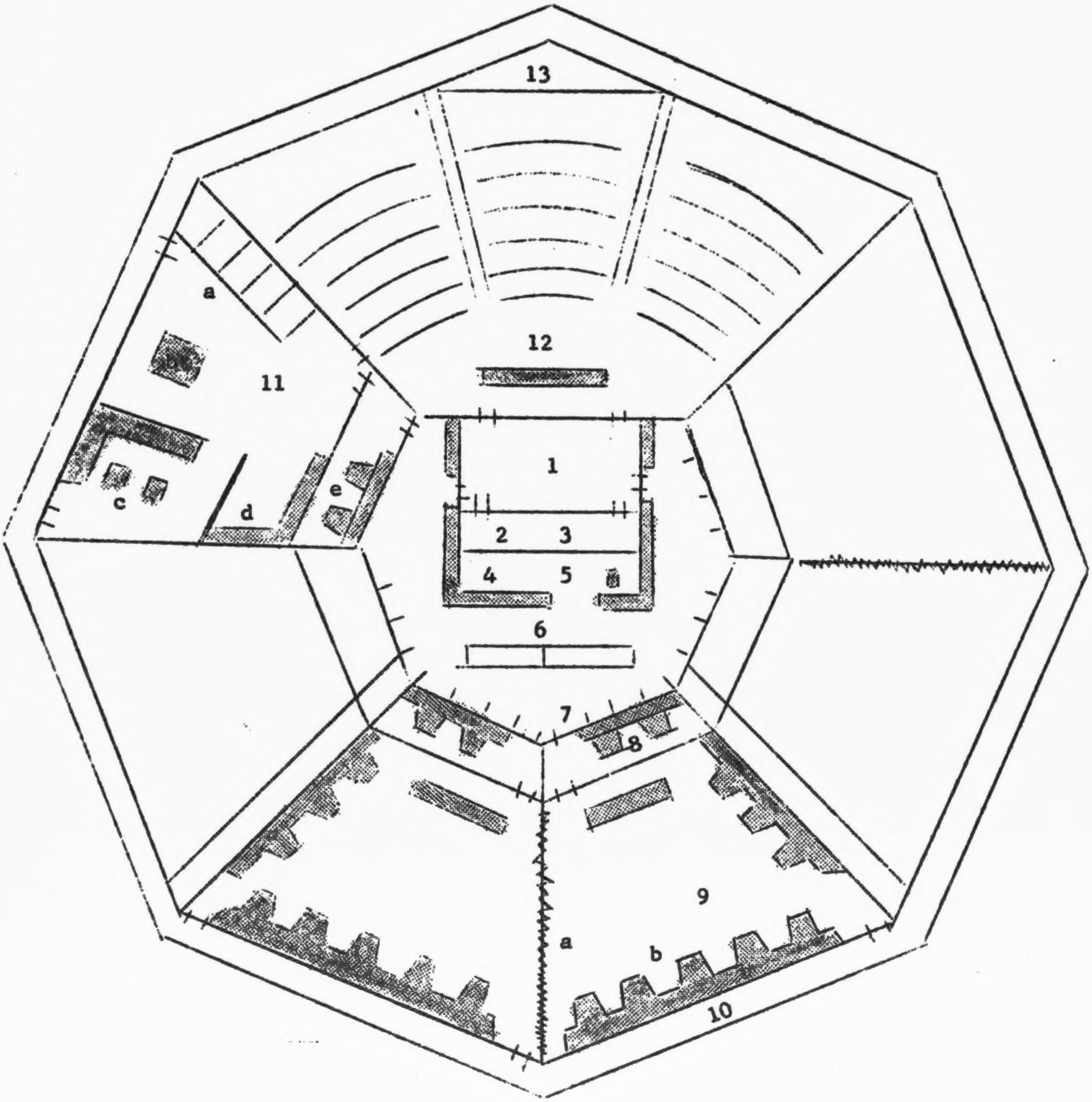
- A project-study area between the laboratory classes and the multi-purpose room with (1) study booths, (2) table and facilities to carry on experiments, (3) cabinets and adjustable shelves for storage.

- Laboratory rooms (5) with facilities to take care of 30 students for (1) discussion, (2) experimentation, (3) display, (4) view television, (5) audio-visual presentations, (6) bulletin and chalk boards, (7) storage area, (8) reading and information area, (9) preparation area, (10) movable wall between two laboratories.

- A conference room for the teachers with individual cubicle with desk and book shelves, preparation area for printed materials, conference table, laboratory facility for teacher research and study, chalkboard and tackboard space, storage space for equipment and materials.
- Living things area for growing plants and animals.

Physical Science Complex

- A centralized multi-purpose room with (1) storage space for all chemicals and equipment for chemistry, physics and related areas, (2) a darkroom, (3) a science library, (4) a display area, (5) a construction area.
- A project-study area similar with biology.
- Laboratory rooms similar to biology but with different facilities for experimentation in chemistry and physics. Physics laboratories should have high ceiling with hooks.
- A conference room for the teachers with individual cubicle with desk and book shelves, preparation area for printed materials, conference table, laboratory facility for teacher research and study, chalkboard and tackboard space, storage space for equipment and materials.



Biological Science Complex (1st Floor)
Physical Science Complex (2nd Floor)

1. General Storeroom (also AV)
2. Closed Circuit TV Studio (darkroom)
3. Construction Room
4. Student Library
5. Storeroom Clerk Office
6. Display Case (portable)
7. Individual Study Area
8. Student Project Room
9. Laboratory Room
    a. Folding Door
    b. Laboratory Tables
10. Corridor
11. Staff Room
    a. Staff Offices
    b. Conference Table
    c. Teacher Aide & Clerk
    d. Professional Library
    e. Research Room
12. Large Group Instruction Room
    Open for Telescopic Work &
    Weather Instruments (2nd Floor)
13. Projection Room

## SOCIAL STUDIES

### I. Major Modification in Content

#### A. Guidance in the social studies program

At present the administration and faculty of each secondary school are given the responsibility to decide whether guidance services and content can be provided best as a part of the social studies or through a separate class. Specific provision appears as follows in the secondary guide:

| | |
|---|---|
| Grade 7 | Orientation to school and self |
| Grade 9 | Guidance: self-discovery, self-improvement, work experience, occupational information, long-range planning |
| Grade 12 | Work in Hawaii (occupational planning) |

In implementing the guidance program certain problems arise frequently: continuity of program, teacher interest and preparation, and utilization of social studies time for guidance content units. With the separation of the double English-Social Studies in most of our high schools, the problem of justification for teaching guidance content units becomes more pressing.

Guidance, however, is an integral part of the curriculum. It appears that the greater flexibility in programming offered by the schools of tomorrow offers Guidance a golden opportunity to "come into its own"--in a team teaching approach in which trained counselors and their team members will handle the program in periods specially designated for this purpose.

#### B. Family living unit in Grade 12

Should this unit be taught by social studies teachers, or by homemaking teachers who are specially trained in this area? It is suggested that this course be handled by Homemaking Education, and that it be made a requirement of all boys and girls in Grade 12.

#### C. Grade 8

It is proposed that in this grade greater emphasis be given to the study of Hawaii as a focal point between East and West. Hawaiian history and the Hawaiian economy will be emphasized also.

#### D. Suggested courses to be offered as electives

Hawaii and the Pacific Rim
Africa in the Modern World
Asia Today
Latin American History
Consumer Education
World Geography
Economic Principles and Policies

E. Student program for travel and study

1. Purpose

   To develop a program that will reinforce and supplement our attempts to help pupils gain an understanding of the cultures and problems of our own state, our country, and other countries of the world.

2. Scope of program

   Elementary Level--Grades 5 and 6

   Two-way pupil exchanges, to be worked out between interested schools, involving an X number of pupils who would exchange parents, homes, and schools for an X period of time during the school year.

   Intermediate Level--Grades 7, 8, 9

   a. Two-way pupil exchanges similar to program set-up for Grades 5 and 6.

   b. As a part of the summer school program, a course entitled "Know Your State of Hawaii" could be offered on the regular six weeks basis. By the time the pupil has finished Grade 8, he will have had the following curricular background on Hawaii:

| | |
|---|---|
| Grade 4 | About one semester on Hawaii Long Ago and Now |
| Grade 5 | Hawaii as a part of the U. S. |
| Grade 6 | Hawaii in relation to the Pacific rim |
| Grade 8 | Hawaii from discovery to statehood |

   The first three weeks of the course could be a survey type offering on Hawaii, at the same time focusing attention to the present and foreseeable future. The fourth and fifth weeks can be spent touring the islands. The last week will be spent back in class.

   High School Level--Grades 10, 11, 12

   a. A course similar to that of "Know Your State of Hawaii," geared to maturity of high school students.

   b. Study and travel to the Orient

      Phase 1: Student growth through special studies throughout year preceding trip

      a. Series of monthly lectures, followed by seminar sessions to be held, for example, on Saturdays and for more concentrated periods during Christmas and Spring vacations. The purpose of these meetings would be to give students a better understanding of the economic, political, and social processes in Asian countries as well as to give them background on the present struggle of these countries for greater self-expression in all phases of living.

b. Directed reading

c. Participation in Pacific and Asian Affairs Council High School Forums is recommended.

Phase 2: Travel. This phase could be handled as a summer class, with high school credit granted.

c. Study and travel to Continental United States, Canada, and if possible, a few selected countries in Latin America.

Phases 1 and 2: Similar to that described for the Orient.

d. Bringing to Hawaii an X number of selected high school students from the Orient, who would be placed in homes of our high school pupils for an X period of time, attending our schools during that periods. Their experience will culminate in a huge Forum in which they will discuss their reactions to living in Hawaii.

e. Two-way student exchanges--Hawaii and Continental United States; Hawaii and the Orient (the latter program is an ambitious one, though not impossible if proper sponsors and cooperating groups are willing to help).

## II. Key Learning Activities

A. Planning
individual work, committee work, pupil-teacher planning led by teacher

B. Reading and studying
books, pamphlets, newspapers, magazines, charts, maps, etc.

C. Listening
listening to teacher lectures, assignments, explanations, summarizations, etc.
listening to pupil reports, group discussinns, panels, symposiums, debates
listening to tapes, recordings

D. Research
individual projects
group projects

E. "Watching" and observing
demonstrations by pupils, teachers, other resource people
motion picture films, filmstrips, materials over opaque and overhead projectors
maps, charts, etc.
plays, skits

F. Preparing
  - preparing oral and written reports, maps, charts, graphs, models, displays, assignments of different kinds

G. Exhibiting
  - art work; maps, charts, graphs, posters, reproductions, booklets, and pamphlets prepared by pupils; commercial materials, etc.

H. Reporting, reciting, and discussing
  - oral reports; reciting and drilling on basic information; discussion

I. Learning to master specific skills
  - critical thinking; problem solving
  - evaluating
  - developing vocabulary
  - map reading; globe reading
  - how to use the library
  - how to take notes from a lecture, reading, etc.
  - how to prepare and deliver a report, or to write out a report
  - interviewing

J. Gaining knowledge and insight
  - in gathering information; in understanding concepts
  - in understanding different kinds of sources of information such as readings, radio, pictures, TV, films, music, lectures, etc.
  - in drawing relationships between cause and effect, or between different kinds of information
  - in drawing generalizations from given facts
  - in helping pupils to reflect on their own experiences as a source of facts

K. Learning to work in groups--group dynamics

L. Learning to take social action within the democratic framework of our society
  - what can pupils actually do--having defined a problem?
  - understanding and developing skill in common processes of democratic action

III. Team Teaching Plan

A. Team teaching will be offered in Grades 9-12

B. A sample: Grade 10 -- 500 pupils
  - These pupils will be divided into four larger groups, each of about 125 pupils.

C. 15 class groups averaging 34 students

D. Teaching team consisting of:

Teachers A, B, C, D, (one to be designated as professional-in-charge on a rotating basis)

Pre-service teachers: 1 intern, 2 practice teachers, 2 observer-participants

1 full-time clerk

E. Schedule

Teacher A Classes: Social Studies 12-1, 12-4, 12-7, 12-10; Journalism

| P'd | M | T | W | TH | F |
|---|---|---|---|---|---|
| 1 | 12-1 | | 12-1 | JL | 12-1 |
| 2 | 12-4 | 12-4 | ↓ | 12-4 | ↓ |
| 3 | 12-7 | ↓ | 12-7 | ↓ | |
| 4 | ↓ | JL | ↓ | | 12-7 |
| 5 | | 12-10 | | 12-10 | JL |
| 6 | 12-10 | ↓ | JL | ↓ | ↓ |

## IV. Physical Facilities

A. Social studies room facilities are arranged to provide for a variety of activities:

Large room for large group instruction--lectures, TV, films, etc.
Standard-sized classrooms
Smaller conference rooms for teachers, pupils, parents
Booths for individual activities

B. Standard-sized classrooms are provided with:

Audio-visual facilities--curtains, screens, sufficient electrical outlets
Bulletin boards
Tackboards
Flannel boards
Movable bookshelves, with adjustable shelves (termite proof)
Air conditioning

(Continued)

Sound-proof construction
Individual table-chair type furniture for regular classroom use
Work tables and chairs (furniture should be termite proof)
Double sinks
Drinking fountain
Filing cabinets and/or storage space containing enclosed, deep, wide shelves
Magazine racks
Exhibit cases
Carpeting or floor covering that is attractive, easy to keep clean

C. Teachers and pupils have access to a library and teaching materials center which are well provided with appropriate teaching materials, supplies, and equipment.

V. Instructional Materials and Equipment

A. Reading material, such as textbooks, supplementary books, pamphlets, magazines, newspapers, and historical documents is provided

B. Source books and reference materials, which parallel the most significant aspects of each unit or course of study, are available

C. Reading materials are selected to meet a variety of reading levels of students

D. Maps, films, charts, models, globes, and similar instructional materials are readily available

E. A variety of resource unit materials is available for the use of teachers

F. Pictures--those paralleling most significant aspects of each unit or course of study; reproductions of famous works of art

G. Files on community resources--speakers, field trips, available materials (free, inexpensive, on-loan)

H. Projectors--movie, filmstrip, overhead, opaque
Tape recorder
Record player
Teaching machines
TV
Radio
Films
Filmstrips
Records
Tapes
Rostrum
Public address system
Neck microphones

I. Mimeograph machines
   Ditto machines
   Typewriters

J. Tools for construction work

VI. Evaluation, Experimentation, Research

A. Provision should be made at outset for a planned program of evaluation with ample funds and qualified personnel to carry on necessary research.

B. The whole area of "extra-curricular" activities requires study. Some of these activites such as student government, assemblies, and certain student-government-spønsored social activites are related to the broader goals of the social studies. However, activities related to other curriculum areas enter the picture: athletic events, contests of all kinds, clubs (athletic, health, commercial, agriculture, homemaking, etc.). It is proposed that the new high school experiment with a planned program of extra-curricular activites which would be evaluated in the manner described under A above.

# SPEECH

## A. Objective

1. The prime objective of a speech education program should be the development by each youngster of effective oral communication.

   Effective oral communication is not mechanical. It comprises examinations not only of the methods of rhetoric, interpretation of the spoken word and such, but aleo of the intricacies of human relationships. The latter is of extreme importance.

## B. Curriculum Modifications

In keeping with the stated objective of the speech education program, the following speech curriculum seems necessary:

1. Grades 7 and 8: (One semester per year or spread throughout the year with 3 sessions per week.)

   Students must take a course of speech fundamentals. Where special need exists, students will take a course in which remedial work is stressed.

   By remedial work is meant problems in dialect (Island, foreign, others) plus work with students possessing speech impediments.

   By fundamentals is meant introduction to processes of speech and orientation to various kinds of communication activities,

2. Grade 9: (One semester)

   Required Introductory Speech Communication Course.

3. Grades 10-12: (One semester and/or year)

   Specialized elective courses drawn from such fields as Public Speaking, Interpretative Reading, Discussion and Debate, Drama, Radio and TV Production, Introductory Semantics, Listening Communication Course for Foreign Students.

4. Grade 12:

   Specialized senior course.
   (Discussed in section, Looking Ahead.)

## C. Methodology

1. The individual teacher

   a. Every teacher should be encouraged, motivated and inspired to perfect continuously his teaching methodology and content.

b. The effective speech staff must include generalists and specialists in fields such as debate, discussion and drama, and a speech therapist.

c. It is strongly recommended that juniors and seniors in the University of Hawaii College of Education, majoring in Speech and Language Arts, become part-time members of the teaching complement.

2. Team Teaching

a. The use of team-teaching in certain aspects of the speech curriculum is highly desirable.

b. In the team-teaching setup, teachers will become specialists in certain subject areas, serving as master teachers. The technique of closed circuit TV should prove useful in master teaching.

3. Correlation with other courses

Because communication skills and techniques must be utilized in every classroom, the time should come when certain speech personnel should teach half-time and devote the remainder of his time in assisting other subject area teachers in the utilization of applicable speech techniques. This would be particularly true in the areas of English and Social Studies. Here is an extension of the team-teaching approach.

## D. School Plant Needs

In addition to the school building facilities (see attached drawings), the following basic equipment should be available to each classroom teacher.

1. TV receivers
2. Sound receivers for radio and school-wide P.A.
3. Tape recorders (audio and visual)
4. Motion picture projectors
5. Overhead projector
6. Library of films, tapes, records

## E. Looking Ahead

Projecting the direction in which State should move in its speech and language arts program, it is essential that:

1. Each student develop individual initiative and a sense of personal responsibility.

2. Each student must have his leadership potential developed to its fullest extent.

3. The learning of each student must be channeled to develop a thinking

and imaginative citizenry.

In order to fulfill these objectives, the Speech Committee highly recommends consideration of a Weekly Seminar, an experimentation which is to be encouraged in the schools of the future.

1. Assume that the student have gone through a speech development program where communicative skills were learned and practiced.

2. Assume that students have gained subject matter content from their language arts, social studies and speech classes.

3. Students must realize that this diverse subject matter needs to be integrated in a total learning and development process.

Therefore, it is suggested that the Weekly Seminar become a senior class program in which each week a full afternoon of time will be set aside for this purpose. This will be in addition to the regular subject-matter courses.

Language arts, social studies and speech students will assemble together for the purpose of generating and sharing ideas, problems and topics growing out of any subject-matter area or from community problems or issues.

After a general presentation by a teacher-leader to clarify a project, the total group will break into smaller working groups. These small groups, under teacher guidance, will handle the topic from many angles.

Some avenues of approach that may be used would be: discussing a problem in panel or symposium form, dramatizing the composite thinking of the group, or writing various phases of their reactions to the topic.

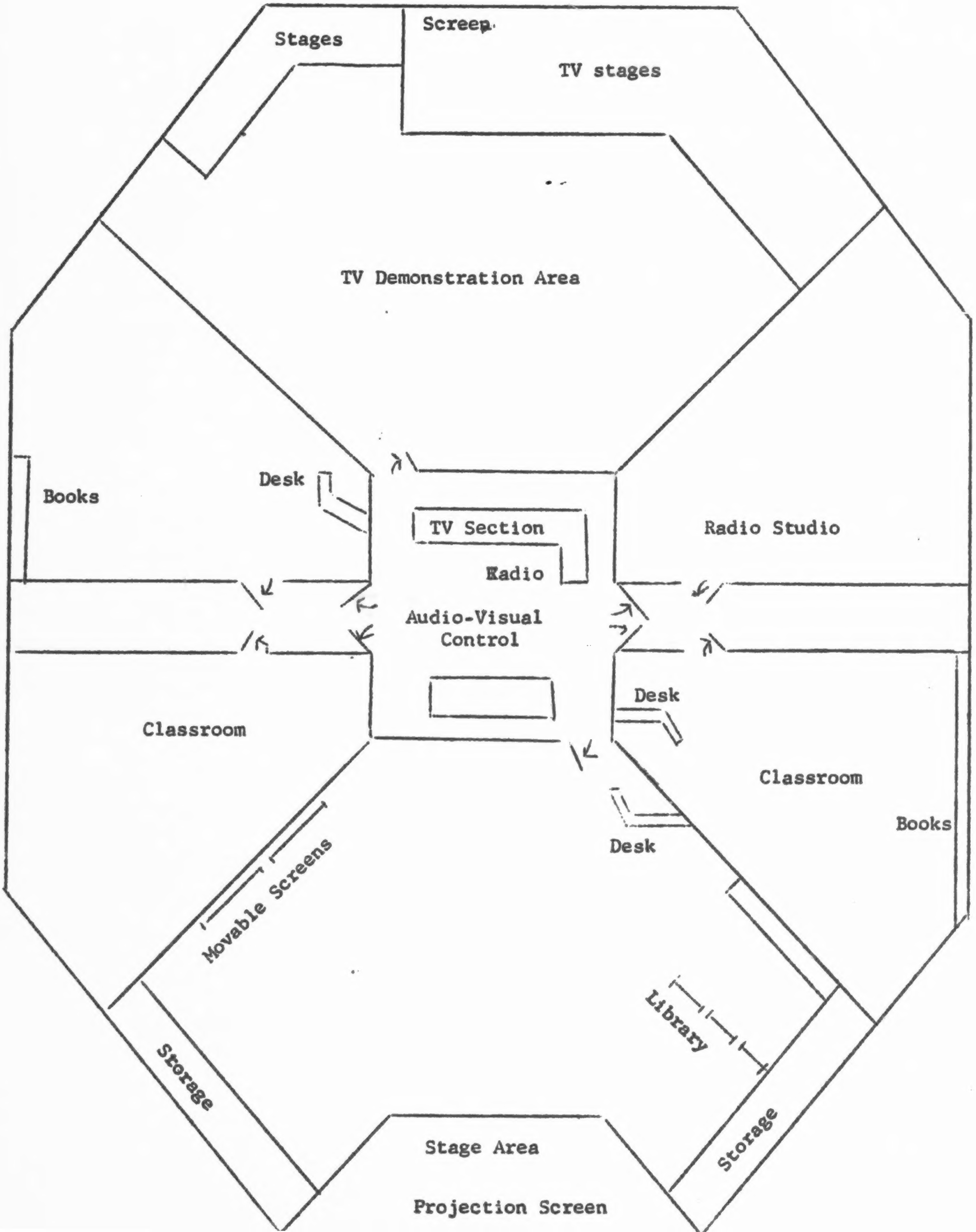
These groups will then come together to share their ideas with the total class organization.

An important aspect of this multi-disciplinary seminar can be the development of leadership abilities, cooperative planning, and other characteristic qualities pertinent to the development of an enlightened citizenry.

It is necessary that the highest caliber of teacher be utilized in the formation of a teaching team to guide this type of program. Extensive planning and careful teaching leadership will be necessary at all stages of student development.

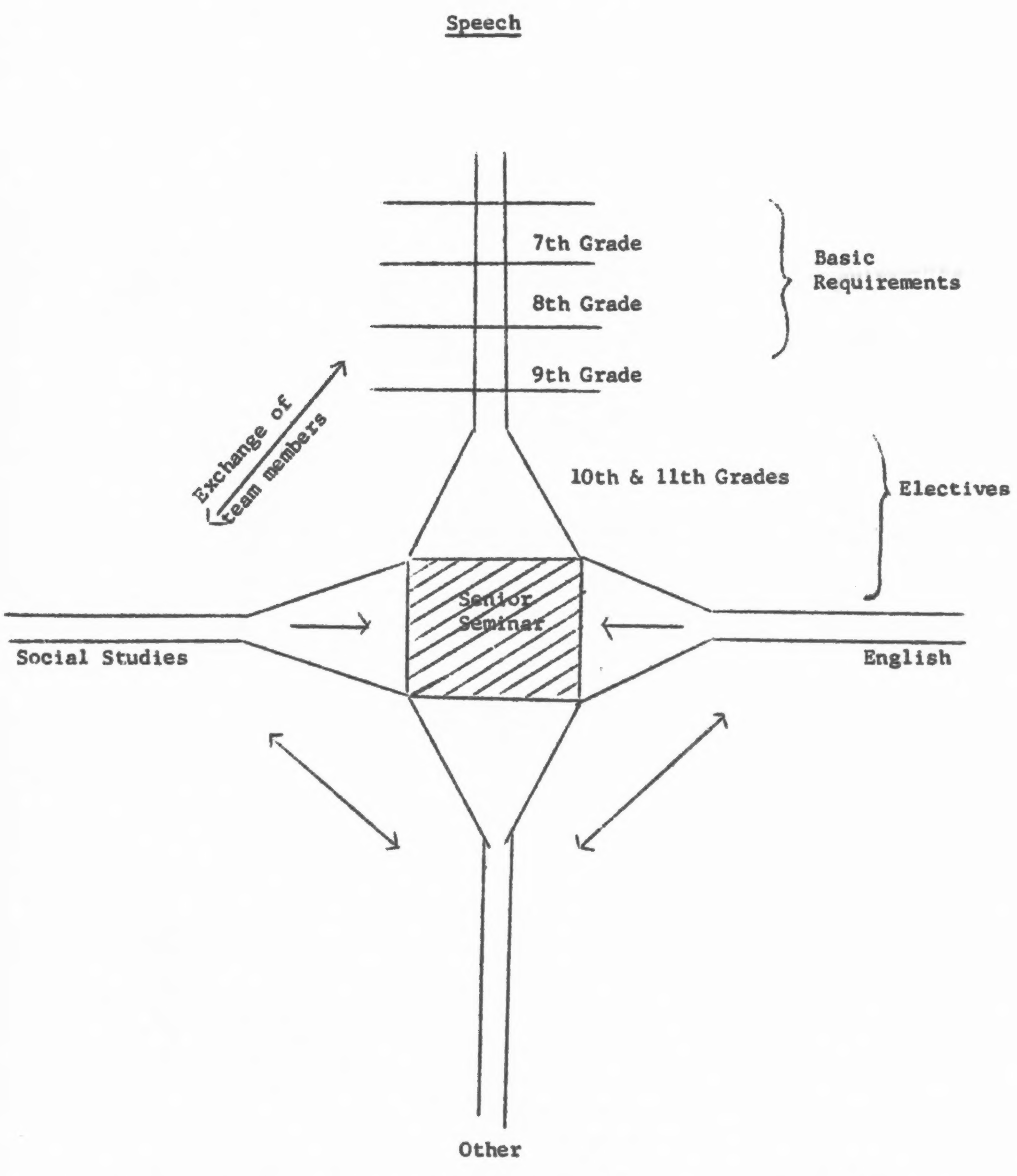
Attachment A

## SPEECH CLASSROOM COMPLEX


Stages
Screen
TV stages
TV Demonstration Area
Books
Desk
TV Section
Radio
Radio Studio
Audio-Visual Control
Desk
Classroom
Classroom
Books
Desk
Movable Screens
Library
Storage
Storage
Stage Area
Projection Screen

Attachment B

## SPECIALIZED SENIOR COURSE


Speech
7th Grade
8th Grade
9th Grade
Basic Requirements
Exchange of team members
10th & 11th Grades
Electives
Senior Seminar
Social Studies
English
Other

Individual subject areas offer specific subject-matter education in all grades 7-12. Basic fundamentals are offered in grades 7-9 while elective subjects widen the students' knowledge of the subject in grades 10-12.

At the 12th grade level, subject matter from several areas is combined in an integrated program where the team-teaching approach is utilized and subject-matter lines disappear. This would result in a block course of perhaps four hours duration on one afternoon per week.

# AUDIO-VISUAL

An effective and efficient program of education makes use of those materials for learning which will give pupils the kind of experiences which will enable them to develop the understandings, attitudes, appreciation, and skills that are the goals of the school. These materials for learning are many kinds. They include not only textbooks, supplementary books, pamphlets, bulletins, and other printed materials, but they also include the maps, globes, charts, models, recordings, slides, filmstrips, motion pictures, and all the other materials and devices which the teacher or the pupil may use to achieve desirable learnings.

Nor can any priority be assigned to the types or kinds of these materials that are needed. The priority of the material is determined by the specific purpose for which it is to be used. For example, a record on tape recording may be the instructional material most needed to develop in pupils an appreciation for fine music of Beethoven. A map of the United States is essential to the teacher who wishes to trace for a history class the route of the Oregon Trail. A motion picture with time lapse photography will most effectively help biology students to understand how a plant grows from a seed. A felt board with fractional sections may be the best way of showing the relations of halves, fourths, and eighths. An enlarged anatomical model of a grasshopper is far better than the insect itself for building an understanding of the various parts of the grasshopper and their relationship to the whole organism.

## Desirable Trends

With a better understanding of the way that learning takes place, with increased recognition of the fact that we learn from seeing and hearing as well as from reading, with improvements in the quality and quantity of audio-visual materials that are available for use in education, with adaptation and adoption of open and closed circuit television to education use, with the development of other new techniques and media such as teaching machines and programmed instruction we are seeing a revolution in teaching methods and the use of various media and methods in our schools. The indications are that one of the principle restrictions to their full utilization is that our buildings are not designed to make effective of these new learning tools. We must provide those facilities which are necessary for their effective use. These include:

a. Provision for use of audio-visual materials in classrooms.

b. Provisions of maintenance, repair, and storage of audio-visual equipment and materials.

c. Provision for individual or small group (teacher and pupil) viewing of and listening to materials.

d. Provision for teacher and pupil preparation of simple materials.

Each of the above is discussed in greater detail in the following:

A. Provision for Use of Audio-Visual Materials in Classrooms.

1. Light control - To assure optimum use of all types of projected

audio-visual materials in classroom facilities shall be provided that will enable the teacher to reduce the light level to a minimum of 1/10 foot candles. Extension light can be excluded through the use of plastic drapes, full closure venetian blinds, on opaque extension louvers. (See pages 54 & 55 survey report Audio-Visual Education in Hawaii.)

2. Ventilation - In many classrooms when light is excluded by drapes or blinds, the free circulation of air is also restricted. This, when classes are using projected materials, results in a rise in the room temperature and a reduction in the supply of oxygen. These two conditions induce drowsiness and reduce mental alertness. To avoid this condition, provision should be made for forced ventilation which will provide a minimum of 10 cubic feet of fresh air per individual per minute. This can be provided through installation of a blower or fan system.

3. Conduits - To permit installation of closed circuit TV, use of open circuit TV, and to carry cables for central sound or intercom system; 1½ inch conduit should permanently be installed throughout building which would permit leads to come to all classrooms with the central sound system, the place origin of closed circuit TV programs and outside TV antennas.

4. Acoustic treatment - Acoustic treatment of ceilings and walls above blackboards and bulletin boards is essential to prepare sound reproduction, creating a good learning environment, and to reduce noise interference between classrooms, classrooms and hallways, and from outside the building.

5. Switches & outlets - Room light switches set doorway and also in back where projection will be used. Two standard 110 volt AC outlets on front and near walls. Outlets on separate circuit from room lights. Sufficient circuits to permit simultaneous use of projection equipment in any number of adjacent rooms. Circuits faced to a minimum of 20 amperes.

6. Map or chart rails in front and side of all rooms.

7. Doorsills flush with floors at all room entrances.

## STORAGE, MAINTENANCE, PREPARATION AND PREVIEWING OF AUDIO-VISUAL MATERIALS AND EQUIPMENT.

Since audio-visual materials are considered as basic instructional materials along with textbooks and other printed materials, it is highly desirable that they be stored and are available from a central source within the school. This is the school library. This means that the library becomes, in truth, a Learning Resource Center. Accordingly, the library must be designed and expanded to provide the needed services and functions which result from this new concept of its role in serving the instructional needs of the school.

Storage - Because of the specialized nature of equipment and materials included under the term "audio-visual," storage space and facilities must be designed to meet the particular needs. Projection equipment and materials should be housed in a separate room from the reading room or other rooms in the library suite. However, it should be directly connected to the library and considered as a part of the total library or Learning Resource Center. It should also have direct access to the hallway so that equipment being moved to classrooms would not pass through the reading room. This room should have a minimum of 80 sq. ft. of floor area for a 300 pupil school and should be increased by 20 sq. ft. for each additional 100 pupils or major portion there of enrolled. Clear space to a height of 5 feet should be provided along one wall of storage room for projection stands and projectors. This should extend for at least 8 feet along the wall and increased in proportion to enrollment. Shelves for materials and supplies should be placed above the 5 feet height. Cabinets and shelves for equipment and supplies should be constructed along the other wall areas. A 36" high counter cabinet 2½ feet wide along a section of one wall with outlets above counter will provide a work area for checking and making equipment repairs. Narrower cabinets and shelves beginning 20" above the counter will provide additional storage for supplies and materials.

Maintenance and Preparation of materials and equipment requires space and facilities for these important and necessary services. These can be taken care of in the library workroom by increasing its size to provide the additional spacerequired. A 50 per cent increase in the regular workroom space will provide needed room for, (a) servicing equipment; (b) inspection and repair of films, filmstrips, slides, poster, recordings, models, charts, etc.; (c) preparation of felt boards, charts, graphics, mounted pictures, etc.

Preview, prelistening, and individual and small group study of projected and recorded materials. Space and facilities should be provided in the Learning Resource Center (library suite) for individual or small group of projected and recorded audio-visual materials. This can be accomplished in part through designing the small conference room or rooms so that it can serve these additional functions. To do this, needed electrical outlets must be provided, the room must be acoustically treated, and sound prolonged to eliminate distracting noise from escaping to the reading room, light control and adequate ventilation must be provided. In addition to using the conference rooms for the purposes indicated, several small rooms (approximately 5' x 8') should be provided for individual preview, prelistening, and pre-planning activities of teachers and pupils.

### Audio-Visual Equipment Needed

| Equipment | Number (at least 1 per building) |
|---|---|
| 16 mm projector | 1 per 250 pupils |
| Combination filmstrip & slide projector | 1 per 150 pupils |
| Wall screens (60" x 60" or longer) | 1 per classroom |
| Tape Recorder | 1 per 150 pupils |
| Record players | 1 per 250 pupils (secondary) 1 for every 2 classrooms (elem.) |
| Opaque projectors | 1 per 400 pupils |
| Overhead projectors | 1 per 400 pupils |

(Current prices subject to change)

## EQUIPMENT REQUIREMENTS

### Basic Studio Equipment

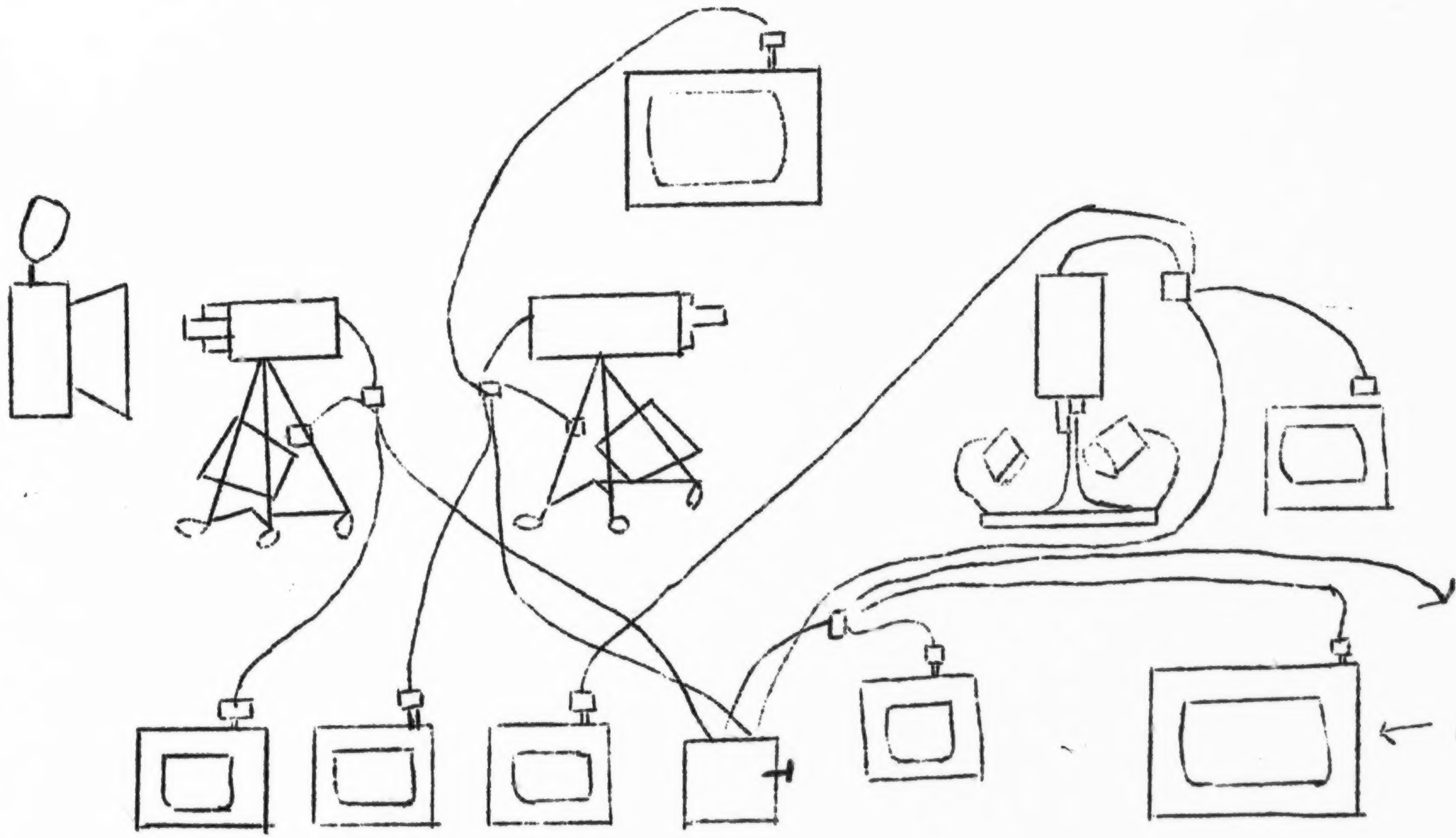
| | | |
|---|---|---|
| 3 | AV-814 Electric Eye TV Cameras w/standard, wide angle and telephoto lenses @$795.00 | $ 2,385.00 |
| 7 | AV-817 Dual-Purpose Monitors @$179.95 | 1,259.65 |
| 1 | AV-823 Classroom Receivers @$229.95 | 229.95 |
| 2 | AV-815 Heavy-duty Tripods @$110.00 | 220.00 |
| 2 | AV-816 Three-wheel Dollies @$38.00 | 76.00 |
| 1 | AV-818, 819 & 820 Close-up Stand @$221.85 | 221.85 |
| 1 | AV-812 Camera Switcher @$95.00 | 95.00 |
| 4 | AV-813 Distribution Boxes @$19.95 | 79.80 |
| 5 | AV-806 Impedance Matching Cable @$11.95 | 59.75 |
| 2 | AV-827 50' Coaxial Cable @$10.00 | 20.00 |
| 1 | AV-835 Sound Modulator with microphone @$199.50 | 199.50 |
| 2 | AV-828 Monitor Mounting Brackets @$19.95 | 39.90 |
| | Total | $ 4,886.40 |

### Optional Studio Equipment

| | | |
|---|---|---|
| 1 | STVA-18 TSI Duolite TV-Sychronized Movie Projector | 695.00 |
| 1 | PT100S Pelco Remote Pan & Tilt Head | 420.00 |
| 1 | PT100SC Pelco Control Unit | 50.00 |
| 1 | 10' cable for above (approximate price) | 10.00 |
| | Total | $ 1,175.00 |

### Classroom Equipment

| | | |
|---|---|---|
| 30 | AV-823 Classroom Receivers @229.95 | 6,898.50 |
| 10 | AV-813 Distribution Boxes @$19.95 | 199.50 |
| 30 | AV-806 Impedance Matching Cable @$11.95 | 358.50 |
| 3 | AV-811 Signal Amplifiers @$125.00 | 375.00 |
| | Assorted Lengths Coaxial Cable & Connectors (Approximate price) | 250.00 |
| | Total | $ 8,081.50 |
| | GRAND TOTAL | $14,142.90 |



as many as required

PLEASE NOTE:

For program requirements, furniture and equipment and building standards, please use Educational Specifications for Public School Buildings, Volume II printed in 1959.